New Busy at Maths

Year 2

Teacher's Resource Book



ALIGNED WITH THE Northern Ireland Primary Mathematics and Numeracy Curriculum 2007

CJFallon NORTHERN IRELAND

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Introduction

New Busy at Maths is a vibrant and engaging new maths programme which fully aligns with the **Northern Ireland Primary Maths and Numeracy Curriculum** (2007). The strands and strand units of the curriculum are presented in a clear and modern fashion.

How does ***New Busy at Maths*** implement the Primary Maths and Numeracy Curriculum?

Linked to each chapter of the Core book is a selection of carefully tailored **Maths Eyes**, **Maths Chat** and **Maths Action** activities which ensure smooth implementation of the curriculum:

- **Maths Eyes** activities highlight the wealth of **maths all around us**.
- **Maths Chat** activities promote meaningful **maths talk** in the classroom.
- **Maths Action** activities encourage **playful learning** and **mathematical modelling**.

The pupils are encouraged to explore these tasks through the use of concrete materials, drawing pictures and the plentiful use of discussion. Each chapter also contains at least one challenging '*Low Threshold, High Ceiling*' activity for the children to explore.

To enhance retention of new learning, **tactile numbers** are used in Year 1. This multisensory learning experience is also designed to motivate and engage pupils.

As part of the ***New Busy at Maths*** programme, each child in Foundation Stage receives an individual **dry wipe board**. In Year 1, it features a five frame on one side and a ten frame on the other, each with accompanying number lines. In Year 2, it includes a twenty frame with a number line on one side and a fifty grid on the other. These are invaluable tools to help children carry out the hands-on tasks and activities throughout the programme.

Engaging **digital activities** are linked to each chapter of the Core book. The activities aim to further consolidate the mathematical concepts being explored as well as bring maths alive through fun and enjoyable maths games. You can explore these interactives at: https://newbusyatmathsni.cjfallon.co.uk/

The digital programme also includes an **interactive e-book** where all the games, activities, and slideshows are embedded for easy access.

New Busy at Maths is designed to be a one-stop shop for all your maths needs in the primary classroom from Year 1 to Year 7. The scheme places **an equal emphasis on 'what' and 'how' children learn** and includes:

- a vibrant and colourful Core book;
- a Home/School Links book that is clearly aligned to the Core book for consolidation and further exploration of the mathematical concepts;
- an individual dry wipe board for the pupil (for Year 1 and Year 2);
- an Individual Pupil Profile Assessment booklet;
- an extensive bank of photocopiable support sheets (PCMs) and Home Support Sheets (worksheets that can be sent home if a child needs help with a particular topic);
- a huge catalogue of digital activities that feature demonstrations, slideshows and interactive games that are engaging, fun and playful;
- comprehensive teacher's notes with editable daily, weekly and yearly plans, all designed to support pupil progression and ensure that all the requirements of this key Area of Learning are met.

Programme Overview

New Busy at Maths has been designed to draw together the key skills, capabilities and mathematical language that are consistent with the statutory requirements of the Northern Ireland Primary Maths and Numeracy Curriculum (2007). The programme supports the development of mathematical confidence, proficiency and understanding by helping children recognise the relevance and importance of maths in their everyday lives. By making purposeful connections between learning and real-life contexts, children are encouraged to become active and engaged learners with a positive approach to problem-solving. Throughout each key stage, the children learn to value maths as a conduit for making sense of the world around them, fuelling natural curiosity and capturing and celebrating imagination.

At **Foundation Stage**, through practical, playful and engaging learning experiences, the children explore:

Foundation Stage

- Number
- Measures
- Shape and Space
- Sorting
- Patterns and Relationships

During **Key Stage 1** and **Key Stage 2**, they build on this foundational learning through ongoing development of understanding and skills in:

Key Stage 1 and Key Stage 2

- Processes in Mathematics
- Number
- Measures
- Shape and Space
- Handling Data

New Busy at Maths forges strong and meaningful cross-curricular links and fosters integrated STEM (Science, Technology, Engineering and Mathematics) learning. In so doing, it builds key skills such as observing, analysing, evaluating, recognising patterns, estimating, using logical thinking and working collaboratively.

Using a range of interactive tools and suggestions for active pupil-led learning, the programme provides opportunities for teachers to tailor the curriculum to the emerging needs of children. The programme is underpinned by clear and measurable learning intentions and success criteria, enabling teachers to plan effectively and to use both formative and summative assessment to inform teaching, monitor progress and support next steps in learning.

Skills Development

New Busy at Maths carefully aligns its resources to support the key skills and capabilities laid out in the Northern Ireland Primary Maths and Numeracy Curriculum (2007)

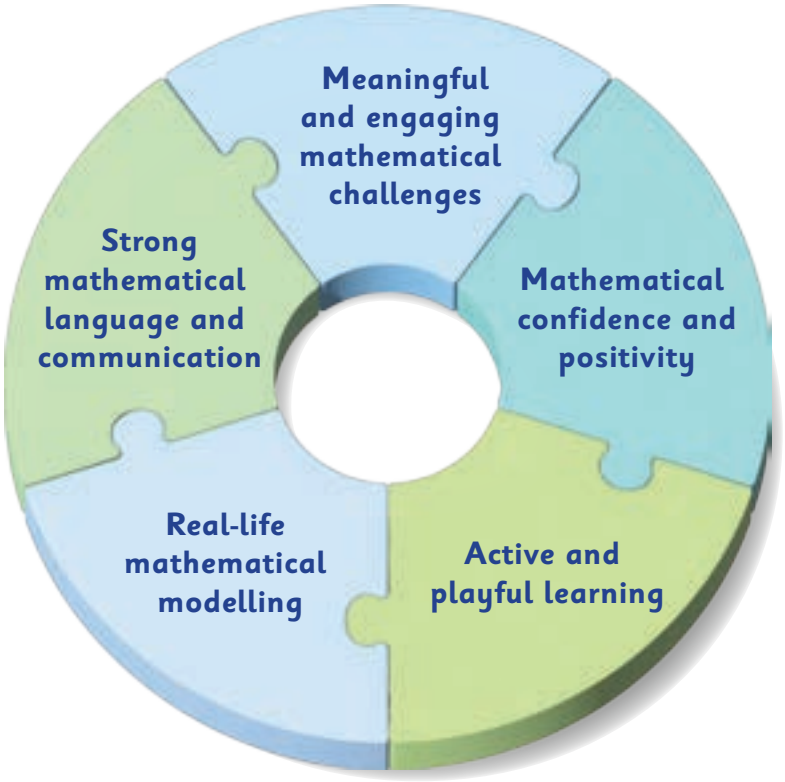
Primary Maths and Numeracy Curriculum – Key Skills and Capabilities	*New Busy at Maths* Programme
• Developing as a responsible citizen • Taking an active role in learning • Applying mathematical knowledge and cross-curricular skills to solve real-life problems • Using mathematics to collect, process and interpret information to develop a critical understanding of the world	The Core book, Home/School Links book and our associated online digital programme reflect the mathematical experiences common to the primary classroom in Northern Ireland. They encourage active and playful learning, both in the classroom and around the school grounds where concrete materials and mathematical tools are foundational to the learning experience. Assessment procedures and opportunities for the children to demonstrate their emerging knowledge are built into each week's work. Teachers can easily gather together meaningful examples of pupil attainment – pupil-led assessments such as coloured traffic lights, half- term formal assessments and the gathering together of work samples.
• Communicating effectively and using language confidently across a range of contexts • Expressing thinking using mathematical language, symbols and representations • Sharing, discussing and comparing mathematical ideas using a range of representations	The programme recognises that 'speaking the language of mathematics' is crucial to the success of the children in their acquisition of new mathematical skills and capabilities. Content specific language is outlined for each strand and both textbooks and online material provide ample opportunities for the children to use this new language.
• Developing creativity and imagination through learning experiences • Exploring mathematical ideas through curiosity and imaginative thinking • Investigating a range of ways to solve mathematical problems and discussing solutions • Using mathematics to make sense of real life information and situations	Maths Eyes, Maths Chat and Maths Action opportunities for each class level and each strand are presented in an intelligent, thoughtful and manageable manner for both the children and teachers. The children are invited to explore the classroom, grounds and local community in order to define what maths in the world 'around us' might look like.
• Sustaining effort when tackling challenging mathematical tasks • Reviewing and evaluating different strategies used to solve mathematical problems • Developing and explaining perspectives and ideas about maths situations • Applying maths in meaningful contexts to support confidence and success in learning	Activities are thoughtfully designed to encourage both collaborative exploration and individual investigation. They are relevant to the lives of the children and draw on the resources readily available to teachers. The use of concrete materials is elaborated upon throughout the programme so that the teacher and the children can co-create meaning and deepen their mathematical experiences.
• Developing skills in using ICT to support learning across the curriculum • Applying a range of digital tools to explore, express and represent mathematical thinking	There is a diverse range of interactive online games, collaborative activities and thought-provoking images. There are suggestions and recommendations for how and where technologies might be employed by the children to demonstrate their skills and share their learning with their families and school communities.

• Simplifying tasks and concepts to support the development of higher-order thinking skills • Developing mathematical thinking through reasoning and problem-solving • Enjoying and engaging in mathematical learning through effort, challenge, reflection and critical thinking	There is a broad range of Maths Action Stations for each topic and strand that allows the teacher to establish consistent and ongoing opportunities for collaborative learning. The children are afforded every opportunity to explore new concepts using a varied approach that supports different learning strengths and needs.

Planning and Preparation

New Busy at Maths provides clear, concise and curriculum-based planning that is easily adapted for use by each teacher across all learning environments, including special classes.

The programme supports key pedagogical practices for the primary classroom by promoting:



It also offers:

- Clear learning intentions and learning outcomes which address all key maths and numeracy competencies.
- Glance cards – single page planning which outlines the week's work and covers the Core book, Home/School Links book, online resources, active learning experiences, Maths Eyes, Maths Chat and Maths Action (stations) teaching.
- Systematic and comprehensive whole school planning that supports progression and ensures that pupils from Foundation Stage through to Key Stage 3 plot a far-reaching experience of maths as part of STEM learning experiences.
- Thoughtfully planned assessment opportunities to complement teaching and learning.

Digital Resources



Interactive digital resources play a key role in enhancing the learning experience of the children. Our *New Busy at Maths* programme includes a suite of invaluable digital resources. These are highly engaging digital activities and games linked to each chapter of the Core book. The digital activities that accompany the programme are expertly structured, colourful, easy to use and access, and are designed with the classroom and home learning experience in mind.

The activities aim to further consolidate the mathematical concepts being explored as well as bring maths alive through fun and enjoyable maths games. Digital literacy is an important feature of the Northern Ireland Curriculum and because of this, *New Busy at Maths* places a significant emphasis on the level of digital resources that accompany the programme.

The free digital resources that accompany *New Busy at Maths* are designed to give the children an opportunity to problem-solve both in school and at home. There are suggestions and recommendations for how and where technologies might be employed by the children to demonstrate their skills and share their learning with their families and school communities.

The interactives are available to explore at: https://newbusyatmathsni.cjfallon.co.uk/

Access

The full suite of digital resources can be accessed both at school by the teacher and at home.

The digital programme also includes an interactive e-book where all the games, activities and slideshows are embedded for easy access.

A key feature of the digital programme is the ease with which it can be navigated. There is a landing page for each Core book, whereby the digital resources are accessible by chapter. Within each chapter, the activities and resources are broken down page by page. This accessibility allows for resources to be accessed efficiently and in sync with how the teacher would naturally progress through the Core book. This creates a comprehensive and robust digital experience to aid teachers in covering the content of each chapter.

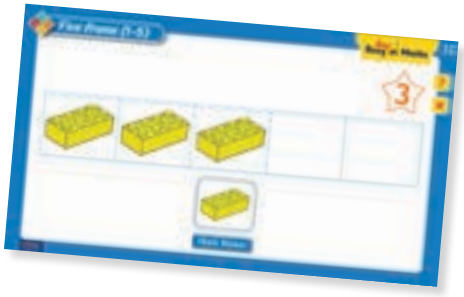
The digital resources for use on the whiteboard include:

- Maths Eyes, Maths Chat and Maths Action Slideshows
- Interactives: Games and Activities
- Dashboard Manipulatives
- Digital Photocopiable Sheets (PCMs)
- Audio



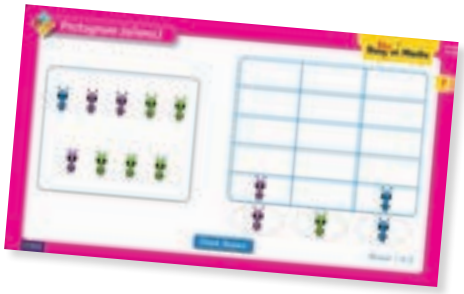
Features of Digital Resources

Maths Eyes, Maths Chat and Maths Action Slideshows



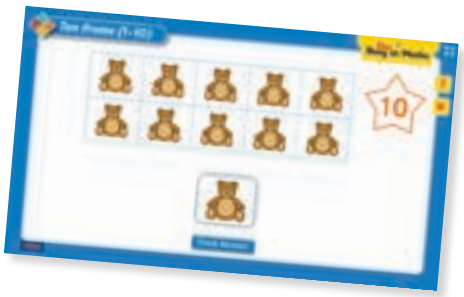
Digital versions of the important Maths Eyes, Maths Chat and Maths Action activities featured in the Core book are available to utilise through the digital programme in the form of slideshows. These aim to stimulate further class discussion and to bring maths into the real world in order for the children to experience and understand maths around them.

Interactives: Games and Activities



The digital programme encompasses a bank of highly engaging and vibrant interactive games and activities. Activities such as drag and drop games and click the correct answer activities support the key elements of each chapter and reinforce content through playful digital learning experiences. Resources such as ten frame activities, sorting objects and ordering/sequencing pictures are key features of the programme to enable further understanding.

Dashboard Manipulatives



The dashboard is a key feature of the digital programme. It is a comprehensive mathematical resource, split by key curriculum sections, such as Number, Time, Money, 2-D and 3-D Shapes, and Weight, etc. Each manipulative is created with adjustable parameters to suit each class level. For example, number lines can be set to a 0–5 or 0–10 line for Year 1 and expanded to a longer 0–20 line for Year 2, and so on. Manipulatives are based on the main class resources but can be used for teacher-led extension activities and to support any additional teaching.

Digital Photocopiable Sheets (PCMs)



An extensive bank of digital photocopiable sheets (PCMs) is available to access. These PCMs link largely to the Maths Eyes, Maths Chat and Maths Action slideshows. They offer extended digital-only activities to expand upon topics covered in the Core book and to reinforce learning.

Audio



Audio-led activities are available for the teacher to play in class.

Year 2: Suggested Yearly Scheme

Term	Month	Week	Strand	Strand Unit	Core book (pages)	Home/School Links (pages)	✓
Halloween	September	1	Number	Numeration and Counting	1–4	1	
		2	Number	Numeration and Counting	5–8	2	
		3	Number	Sets and Operations	9–12	3	
		4	Number	Sets and Operations	13–16	4	
	October	1	Number	Numeration and Counting	17–21	5–6	
		2	Number	Numeration and Counting	22–25	7–8	
		3	Algebra	Patterns, Rules and Relationships	26–29	9	
		4	Number	Uses of Number	30–31	10	
		Assessment/Revision					
Christmas	November	1	Measures	Time	32–35	11–12	
		2	Algebra	Patterns, Rules and Relationships	36–40	13–14	
		3	Measures	Measuring – Length	41–44	15–16	
	December	1	Number	Sets and Operations	45–47	17–18	
		2	Shape and Space	Shape	48–52	19	
		3	Number	Place Value and Base Ten	53–57	20–21	
		Assessment/Revision					
February (Mid-term)	January	1	Data and Chance	Data	58–60	22	
		2	Shape and Space	Shape	61–64	23	
		3	Shape and Space	Transformation	65–67	24	
	February	1	Number	Place Value and Base Ten	68–72	25–26	
		2	Measures	Time	73–76	27–28	
		3	Shape and Space	Spatial Awareness and Location	77–80	29	
		Assessment/Revision					
Easter	March	1	Number	Numeration and Counting	81–84	30–31	
		2	Measures	Measuring - Length	85–88	32	
		3	Number	Place Value and Base Ten	89–93	33–34	
		4	Measures	Measuring - Capacity	94–96	35	
	April	1	Number	Sets and Operations	97–101	36–37	
		2	Algebra	Patterns, Rules and Relationships	102–104	38–39	
		3	Number	Place Value and Base Ten	105–109	40–41	
		Assessment/Revision					
Summer	May	1	Measures	Money	110–113	42–43	
		2	Measures	Measuring - Weight	114–117	44	
		3	Measures	Time	118–121	45–46	
	June	1	Number	Sets and Operations	122–126	47–48	
		2	Number	Fractions	127–131	49–50	
		3	Measures	Money	132–136	51–52	
		Assessment/Revision					

September: Week 1	**Chapter 1** (Revision)	**Strand:** Number	**Strand Unit:** Numeration and Counting
Core book: Pages 1–4	**Home/School Links book:** Page 1	**Teacher's Resource book:** Pages 9–11	**PCMs:** 1–8

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, the children should be enabled to:* • develop an understanding of one-to-one correspondence and come to appreciate that the size of a set is given by the last number in the count; • count forwards in ones within 5/10 from different starting points; • understand in counting activities that 'none' is represented by zero; • investigate different ways of making sets for a given number within 5/10; • explore numbers relevant to their everyday lives.
Learning Outcome(s)	Develop an awareness that the purpose of counting is to quantify.
Mathematical Concepts	There are five principles of counting: one-one, stable order, cardinal, order irrelevance and abstraction. The last number in the count indicates the quantity in a set. There are a range of counting strategies, including grouping objects and arranging objects in various visual configurations.

Promoting Maths Talk
Count, how many, write, draw, trace, words, look around, rainbow numbers, set, correct, row, numerals, zero, one, two, three, four, five, six, seven, eight, nine, ten.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Revision can be found on the Chapter 1 Landing Page.

Station Activities 1–6 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting, Ordinal Number

Home Support Sheets
Send **Home Support Sheet 1** home so parents/guardians can help children with revision.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Draw the Numerals 0–10; **Station 2:** Making Playdough Numbers; **Station 3:** Making Towers; **Station 4:** Tracing the Numerals 0–10; **Station 5:** Rainbow Colour the Numerals 0–10; **Station 6:** Writing the Numerals 0–10.

Digital Resources: Chapter 1 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment: ongoing, informal and unrecorded regular assessment (observation).
3. Planned interactions – conferencing with the child to ascertain his/her thought process about a specific topic: Revision.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Term 1: September – Week 1

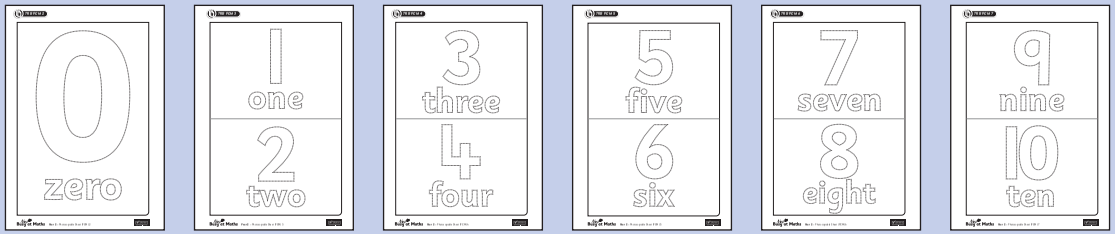
Chapter 1: Helpful Hints – Revision

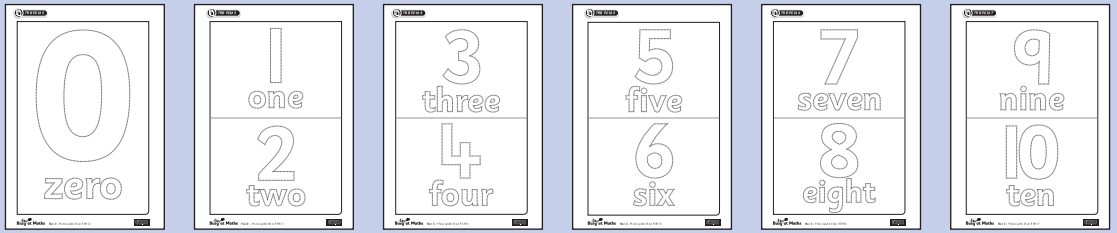
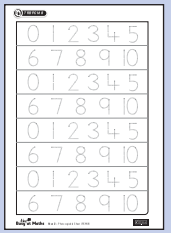
Maths Action – Whole Class Activity
Give each child two copies of **PCM 1** which has 6 circles. Ask the children to place sets of 0–10 (buttons, cubes, shells, counters, etc) in order, starting with zero.
In the remaining circle, each child can ask their partner to choose a set for them to make.

Maths Chat
1. Talk about all the different places where the numerals 0–10 can be seen in the classroom, playground, at home or in the environment: buses, telephones, calendars, menus, bills, in shops, petrol stations, clock faces, book pages, doors, etc.
2. Think of some more counting questions to ask the children about the pictures found in the Core book, e.g. 'Are there more scooters or bikes?'/'How many more boys are there than girls?'

Maths Eyes
Look around the classroom/playground/house. Ask the children where they can see the numerals 0–10: in the Core book, mobile phone, classroom door, calendar, on charts on the wall, etc.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations

Station 1	**Draw the Numerals 0–10:** The children can draw the numerals 0–10 in a box of rice, in a sandbox, in a box of sprinkles. Use pictures as a guide. **Differentiation:** Some children may focus on one activity while others can do them all. 
Station 2	**Making Playdough Numbers:** The children can use playdough to make the numerals 0–10. 
Station 3	**Making Towers:** Instruct one child to use some blocks/interlocking cubes to build towers going up in steps from 1–10. Then, instruct the rest of the group to look away while you hide one tower behind your back. Can they guess which tower has been removed? Take turns. **Differentiation:** Make the towers from 10–0. 
Station 4	**Tracing the Numerals 0–10:** Give each child a copy of **PCMs 2**, **3**, **4**, **5**, **6**, **7**. Ask them to trace the numerals. **Differentiation:** Children who are able can trace and write the number words zero to ten. 

Station 5	**Rainbow Colour the Numerals 0–10:** Give each child a copy of **PCMs 2**, **3**, **4**, **5**, **6**, **7**. Ask them to 'rainbow colour' the numerals. 
Station 6	**Writing the Numerals 0–10:** Give each child a copy of **PCM 8**. Ask them to write/trace the numerals. **Differentiation:** Allow the children to complete the rows of the writing/tracing at their own level. 

September: Week 2	**Chapter 2** (The Equals (=) Sign)	**Strand:** Number	**Strand Unit:** Numeration and Counting
Core book: Pages 5–8	**Home/School Links book:** Page 2	**Teacher's Resource book:** Pages 12–14	**PCMs:** 9–13

***Please note:** This chapter revises the important mathematical language and symbols relating to addition that were introduced in *Year 1*.

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, the children should be enabled to:* • use appropriate mathematical language and symbols; • develop an understanding of one-to-one correspondence and come to appreciate that the size of a set is given by the last number in the count; • compare sets by matching objects/counting objects to understand the terms 'more than', 'less than', 'the same'; • understand the concept of addition by combining sets of objects to find 'how many'.
Learning Outcome(s)	Develop an awareness that the purpose of counting is to quantify.
Mathematical Concepts	Quantities can be subitised and compared without needing to count or assign a numerical value. There are a range of counting strategies, including grouping objects and arranging objects in various visual configurations. The last number in the count indicates the quantity in a set.

Promoting Maths Talk	**Emphasising Mathematical Modelling/ Encouraging Playfulness**	**Differentiation**	**Linkage**
Colour, equal(s) sign/symbol, finish, the same, trace, practise, plus, counters.	Digital activities for The Equals (=) Sign can be found on the Chapter 2 Landing Page. Station Activities 1–5 can be completed in small groups on a day of teacher's choice. Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*	Differentiated exercises are included in the Maths Action Stations.	**Number:** Combining and Partitioning **Algebra:** Pattern **Home Support Sheets** Send **Home Support Sheet 2** home so parents/guardians can help children with the equals sign.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Balance the Scales; **Station 2:** Equal Grabs; **Station 3:** Barrier Game Towers; **Station 4:** Jigsaw Cards; **Station 5:** Matching Pairs.

Digital Resources: Chapter 2 Landing Page

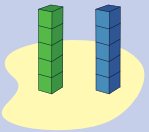
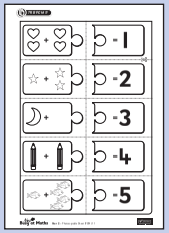
Assessment:	**1.** Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress. **2.** Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation). **3.** Planned interactions – conferencing with the child to ascertain his/her thought process about a specific topic: The Equals (=) Sign. **4.** Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
Give each group a copy of **PCM 9** and a set of dominoes with totals within five. Ask the children to cut out the words and symbols. Give each child a copy of **PCM 10** which has four number sentences using the words 'and'/'make'. Ask the children to make the number sentences using the domino pieces and the words plus and equals instead of and/make. They can then replace the words plus and equals with the + and = signs/symbols.

Maths Chat
Talk about the different ways in which the children can say the number sentences that are used to make the story of five. For example: '2 and 3 make 5'; '2 plus 3 make 5'; 'When I add 2 and 3, I get 5,' etc.

Maths Eyes
Talk about where the plus and equals signs/symbols can be seen in the classroom, playground, at home or in the environment.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations.

Station 1	**Balance the Scales:** The teacher gives a selection of objects (marbles, blocks, paperclips, toy cars, glue sticks, etc.) and a bucket balance to each pair/group. The children have fun balancing like-objects, e.g. one child places four marbles into a bucket. The rest of the group uses marbles to balance the bucket which has four marbles. Encourage the children to use the correct language, i.e. the two buckets are equal/not equal. **Differentiation:** To extend the activity, the children could investigate unlike objects, e.g. how many marbles are equal in weight to a glue stick? 
Station 2	**Equal Grabs:** Each pair/group needs a bag of 20 similar objects (Uni-fix cubes, attribute bears, counters, etc.). One child must close his/her eyes and 'grab' a handful of the Uni-fix cubes from the bag and place them on his/her whiteboard. Their partner must now 'grab' a handful from the bag and place them on his/her whiteboard. The children must compare their objects. Are they equal or unequal? The children should be encouraged to justify their answers. **Differentiation:** To add an element of competition, the different pairs within the group can compete with each other. When an 'equal grab' occurs, the pair receives a counter. At the end of the allotted time, the pair with the most counters wins. 
Station 3	**Barrier Game Towers:** Each child has 10 cubes/blocks and a barrier between them (e.g. a lunch box/schoolbag). One child is the leader and on his/her command, both children must build a tower using as many of the blocks (between 1–10) as he/she wants. As per the leader's instruction, the children must reveal their towers and compare them. Are they equal or not equal? **Extension:** How many more cubes do I (or you) need for the towers to be equal? **Differentiation:** The number of cubes/blocks being used can be increased or decreased depending on ability. 
Station 4	**Jigsaw Cards:** Arrange the children in pairs. Each pair needs a copy of **PCM 11**. The children must count the objects on the picture cards on the left and match them to the correct totals on the right. The children can glue their completed jigsaws to an A4 sheet. **Differentiation:** The children may complete the activity individually or in pairs depending on ability/confidence. 

Station 5

Matching Pairs: Arrange the children in pairs or small groups. Each group needs a copy of **PCMs 12** and **13**, each of which has 5 long cards and 5 short cards. The long cards represent the question, the short cards represent the answers. Ask the children to cut out the cards and place them face down on the table. To start the game, one child turns over any long card and any short card. If the cards 'match', the child keeps the pair and has another go, e.g. the card showing three pencils plus one pencil and the card showing the numeral 4. The child with the most matches at the end wins.
Differentiation: Some children may play the game using only PCM 12, while others can use both.

September: Week 3	**Chapter 3** (Combining 1)	**Strand:** Number	**Strand Unit:** Sets and Operations
Core book: Pages 9–12	**Home/School Links book:** Page 3	**Teacher's Resource book:** Pages 15–17	**PCMs:** 14–16

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, the children should be enabled to:* • understand the concept of addition by combining sets of objects to find 'how many'; • use appropriate mathematical language and symbols; • discover the components of numbers within 10 by investigating different ways of partitioning sets into subsets practically, talk about the outcomes.
Learning Outcome(s)	Recognise and understand what happens when quantities (sets) are combined.
Mathematical Concepts	Quantities (or sets) can be combined. A whole number does not change when adding or subtracting zero from that number. The base-ten number system consists of 10 digits and is based on groups of ten.

Promoting Maths Talk
Combining, how many, count, add together, partitioning, draw, complete number sentence, plus, equal(s), ten frame, colours, orange, blue, green, tens, set.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Combining 1 can be found on the Chapter 3 Landing Page.

Station Activities 1–5 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting, Plus and Equal Signs

Home Support Sheets
Send **Home Support Sheet 3** home so parents/guardians can help children with combining.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Cup Combining; **Station 2:** Combining Dice Numbers; **Station 3:** Combining Numbers on the Ten Frame; **Station 4:** Combining Numbers using Cubes; **Station 5:** Combining.

Digital Resources: Chapter 3 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interactions – conferencing with the child to ascertain his/her thought process about a specific topic: Combining 1.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Term 1: September – Week 3

Chapter 3: Helpful Hints – Combining 1

Maths Action – Whole Class Activity
Place three yellow and seven green counters/cubes/multi-links on the magnetic board/table (any two colours will do). Ask the children to work in pairs to mirror your actions. Ask questions such as:
How many yellow cubes are there?
How many green cubes are there?
How many cubes are there altogether?
So, three and seven equals ten.

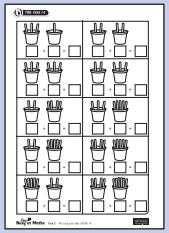
Maths Chat
Ask the children to talk about the different ways in which we can say the number sentences that are used to combine two sets to make 10, linking to Chapter 2.
1. 6 and 4 make 10 / 6 plus 4 make 10.
   When I add 6 and 4, I get 10.
2. 7 and 3 make 10 / 7 plus 3 make 10.
   When I add 7 and 3, I get 10, etc.

Maths Eyes
Talk about where the numerals 0–10 can be seen in the classroom, playground, at home or in the environment – newspapers, clock faces, speed signs, fridge numbers, birthdays, etc.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations

Station 1

Cup Combining: Ask the children to work in pairs, taking turns being the leader. Each pair needs two cups and ten lollipop sticks. One child is designated as the leader. He/she shares some (or all) of the lollipop sticks between the two cups (in any array he/she wants). The other child must say the number sentence out loud, i.e. five plus five equals ten.
Extension: Encourage both children to write the number sentence on their individual whiteboards and compare their answers.
Differentiation: Give children who are able a copy of **PCM 14** which has a series of number sentence cards. The cards should be cut out, jumbled and placed upside down in the centre of the table. The children can pick a card and must then complete the number sentence. Some children can complete this as a normal worksheet. Others may need the stimulus of cutting out the individual cards to focus on individual questions.

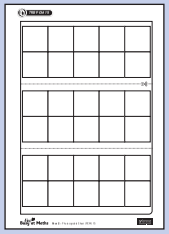


Station 2

Combining Dice Numbers: Arrange the children in pairs or small groups. Give each pair/group two dice. Ask them to throw their dice. Then ask them to add the totals – if they throw more than a total of ten, they must throw the dice again.
Differentiation: The children can write the number sentences, as in the Core book.

Station 3

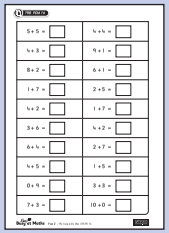
Combining Numbers on the Ten Frame: Arrange the children in pairs. Give child A one ten frame from **PCM 15** and some coloured counters. He/she uses the coloured counters to make a sum, e.g. five red and four green. He/she asks Child B to combine the totals, e.g. 5 + 4 = 9.
Differentiation: The children can write the number sentences on a whiteboard.



Station 4

Combining Numbers using Cubes: Arrange the children in pairs or small groups. Give each pair/group a number of interlocking cubes/Lego bricks/multi-links, etc. Ask the children to make the story of ten using all the number bonds, e.g. 0 + 10 = 10; 1 + 9 = 10, etc. These cubes can be placed either horizontally or vertically.
Differentiation: Ask the children to make their own addition questions using different coloured cubes, e.g. 8 (red) + 2 (green) = 10; 6 (blue) + 3 (yellow) = 9, etc.

Station 5	**Combining:** Give each child in the group a copy of **PCM 16**, which has 20 combining questions using two addends. Ask the children to complete the PCM. They can use paper plates to mirror each question using counters or any other available manipulatives. **Differentiation:** Depending on ability, some children may work in pairs.



September: Week 4	**Chapter 4** (Partitioning)	**Strand:** Number	**Strand Unit:** Sets and Operations
Core book: Pages 13–16	**Home/School Links book:** Page 4	**Teacher's Resource book:** Pages 18–20	**PCMs:** 17–22

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, the children should be enabled to:* • partition sets into subsets in preparation for exploring components of number; • discover the components of numbers within 10 by investigating different ways of partitioning sets into subsets practically and talking about the outcomes; • understand the concept of addition by combining sets of objects to find 'how many'.
Learning Outcome(s)	Recognise and understand what happens when quantities (sets) are partitioned.
Mathematical Concepts	Quantities (or sets) can be partitioned. Sets, objects and spaces can be partitioned in different ways.

Promoting Maths Talk
Partitioning, separate, share, draw, count, set, plus, equals, groups, number sentence.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Partitioning can be found on the Chapter 4 Landing Page.

Station Activities 1–6 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting, Plus and Equal Signs

Home Support Sheets
Send **Home Support Sheet 4** home so parents/guardians can help children with partitioning.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Hula Hoop Toss - Partitioning; **Station 2:** Towers - Partitioning; **Station 3:** Partitioning on the Whiteboard; **Station 4:** Partitioning on the Ladybird; **Station 5:** Partitioning on the Butterfly; **Station 6:** Partitioning.

Digital Resources: Chapter 4 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interactions – conferencing with the child to ascertain his/her thought process about a specific topic: Partitioning.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
Place ten counters/cubes/multi-links on the magnetic board/table (all one colour). Ask the children to work in pairs to mirror your actions. Separate the ten counters into two sets. Ask questions such as: How many counters are in this set? How many are in the other set? How many counters are there altogether? So, ten can be split into five and five.

Maths Chat
Ask the children to talk about the different ways we can say the number sentences that are used to split ten into two parts, linking this to Chapter 3 where we combined two sets.

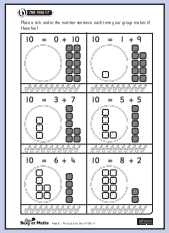
1. 1 and 9 make 10 / 1 plus 9 equals 10.
   Ten can be split into 1 and 9.
   If I have 10 and move 9 away, 1 is left.
2. 4 and 6 make 10 / 4 plus 6 equals 10.
   Ten can be split into 4 and 6.
   If I have 10 and move 6 away, 4 are left, etc.

Maths Eyes
Ask the children to talk about where they might see the numerals 0–10 in the classroom, playground, at home or all around them – mobile phones, buses, door, calendars, book pages, petrol pumps, etc.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations

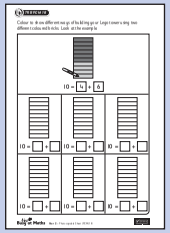
Station 1

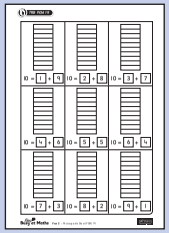
Hula Hoop Toss – Partitioning: Arrange the children in groups of five. Give each child a copy of **PCM 17**. The children take turns throwing two bean bags into the hoop (from an agreed starting point, e.g. a cone/line). When all ten beanbags have been thrown, the children must count the beanbags that are outside the hula hoop, and then the beanbags inside the hula hoop. They must then agree on the correct number sentence that has been made, e.g. 10 = 2 + 8. When the number sentence has been established, the children should find if the corresponding number sentence is on PCM 17 and if so, trace over one of the ticks under the image.
Extension: Encourage the children to identify which number sentence got the most ticks by the end of the activity e.g. 'Our group made the number sentence ten equals two plus eight, four times!'
Differentiation: The children complete the activity as many times as they can.



Station 2

Towers – Partitioning: Arrange the children in pairs. Each pair has ten red Lego bricks/cubes and ten blue Lego bricks/cubes (any two colours will do). The children must work together to show different ways of making a tower of ten (e.g. 10 = 10 + 0/10 = 1 + 9, etc.). Each time they make a new tower, they must colour it on **PCM 18**.
Differentiation: PCM 19 has a series of partitioning cards within ten. Some children may need the stimulus of picking from these cards to help them focus on the activity on PCM 18. The cards should be jumbled and placed upside down for the children to pick from.

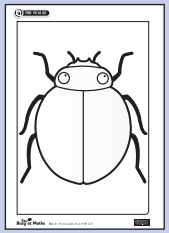


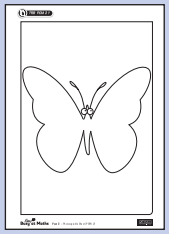


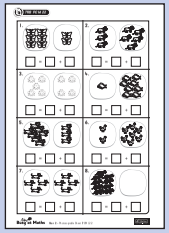
Station 3

Partitioning on the Whiteboard: Give the children up to ten pom poms/counters/beads/buttons and their whiteboards. Ask them to draw a line down the middle of the whiteboard. With a partner, take turns sharing the objects between the two sides of the whiteboard. The sharing number could be decided by taking one suit from a deck of cards with the numbers 2–10 only. Child A shares the corresponding number of objects between the two sides of the board. Child B is then asked to call out the corresponding number sentence.
Differentiation: Ask the children who are able to write the different number sentences/bonds at the bottom of their whiteboards.

Station 4	**Partitioning on the Ladybird:** Give the children **PCM 20**, showing a large ladybird. The ladybird can be laminated for multiple uses. Give the children up to 10 counters and ask them to partition the counters between the two wings of the ladybird in as many different ways as possible. Explain that they are finding the different ways a whole number can be partitioned into two parts. Ask the children to take turns making a partition and explaining how they have split the counters. Encourage their partner or another member of the group to say the corresponding number sentence aloud, for example, 7 = 1 + 6. **Differentiation:** Ask children who are able to record their thinking to write the different number bonds/partitioning number sentences they have found on their whiteboard. Encourage them to find all the possible ways of partitioning the chosen number into two parts.
Station 5	**Partitioning on the Butterfly:** Give the children **PCM 21**, showing a large butterfly. The butterfly can be laminated for multiple uses. Give the children up to 10 counters and ask them to partition the counters between the two wings of the butterfly in as many different ways as possible. Explain that they are finding the different ways a whole number can be partitioned into two parts. Ask the children to take turns making a partition and explaining how they have split the counters. Their partner or another member of the group can say the corresponding number sentence aloud, for example, 10 = 4 + 6. **Differentiation:** Challenge children who are ready to find all the possible partitions for a chosen number using PCM 21 to help them. Ask them to check that they have found every possible combination and explain how they know there are no more.
Station 6	**Partitioning:** Give each child in the group a copy of **PCM 22**, which has 8 partitioning questions using two addends. Ask the children to complete PCM 22. They can use paper plates to mirror each question using counters or any other available manipulatives. **Differentiation:** Ask the children who are able to come up with their own partitioning questions using a whiteboard.







October: Week 1	**Chapter 5** (Numerals 10–15)	**Strand:** Number	**Strand Unit:** Numeration and Counting
Core book: Pages 17–21	**Home/School Links book:** Pages 5–6	**Teacher's Resource book:** Pages 21–23	**PCMs:** 15, 23–26

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, the children should be enabled to:* • use appropriate mathematical language and symbols; • extend, when appropriate, counting in ones and recognition of numbers beyond 10; • develop an understanding of one-to-one correspondence and come to appreciate that the size of a set is given by the last number in the count; • understand that 'teen' numbers are made up of 10 plus another number; • count forwards and backwards from different starting points.
Learning Outcome(s)	Demonstrate proficiency in using and applying different counting strategies. Use estimation to quickly determine number values and number calculations. Select, make use of and represent a range of addition and subtraction strategies.
Mathematical Concepts	Estimation and counting strategies can be applied to determine quantities/calculations. The reasonableness of estimations can be tested by counting.

Promoting Maths Talk
Numbers, ten, eleven, twelve, thirteen, fourteen, fifteen, count, write, trace, colour, numerals, estimate, more than/less than, triangles, circles, squares, rectangles, semi-circles, ten frames, number strip.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Numerals 10–15 can be found on the Chapter 5 Landing Page.

Station Activities 1–8 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Algebra: Pattern
Number: Combining and partitioning
Shape and Space: Triangles, circles, squares, rectangles, semi-circles

Home Support Sheets
Send **Home Support Sheet 5** home so parents/guardians can help children with the numerals 10–15.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Number Strips 1 to 20; **Station 2:** Number Strips 20 to 1; **Station 3:** Estimate and Count; **Station 4:** Ten Frame Teen Numbers; **Station 5:** Fast Tweezers; **Station 6:** Number Strip Clues; **Station 7:** Number Hunt (10–15); **Station 8:** Missing Number (10–15).

Digital Resources: Chapter 5 Landing Page

Assessment:	**1.** Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress. **2.** Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation). **3.** Planned interactions – conferencing with the child to ascertain his/her thought process about a specific topic: Numerals 10–15. **4.** Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Term 1: October – Week 1

Chapter 5: Helpful Hints – Numerals 10–15

Maths Action – Whole Class Activity
Pass the Teddy: The children sit in a circle in the class, playground or in the PE hall. They count forwards from 1–15. One child passes the teddy to the child beside him/her as they count. When they get to 15, the next child must start at one again. Continue the game as many times as possible in the time allowed.
Differentiation: If a child is unable to say the next number, the other children say the number together, assisting him/her.
Extension: Count backwards from 15–1. The game can be altered to 'Pass the car/pencil case/bottle…' per each round.

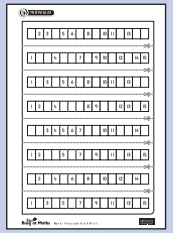
Maths Chat
Look carefully at the number 11. Ask the children to list as many 'facts' as they can about the number 11. For example:
1. It has two digits.
2. It is made up of one and one.
3. It is made of straight lines.
4. It comes after 10.
5. It comes before 12.
6. It comes between 10 and 12.
Do the same for numerals 12–15.

Maths Eyes
Ask the children to talk about the places where they might see any of the numerals 10–15 – buses, calendars, mobile phones, birthday cards, trains, train stations, cooker ovens, microwave ovens, calculators, book pages, clock faces, streets, doors, etc.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Stations

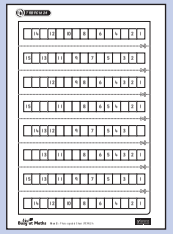
Station 1

Number Strips 1 to 20: Arrange the children in pairs or small groups. Give each pair/group a copy of **PCM 23** which has some number strips of the numbers 1–15. Ask the children to cut out the individual number strips. (The strips could be enlarged and photocopied on to A3 paper, if possible. These can be laminated and stored for use later in the year.) Using a whiteboard marker/pencil, the children must fill in the missing numbers on the strips. When finished, the children must rub out their answers and move onto a new strip, completing as many as possible in the time allotted.
Differentiation: Children may use their own number strip (1–15) to help them if they find the task difficult, but the aim is to move away from using this aid when the children are ready.



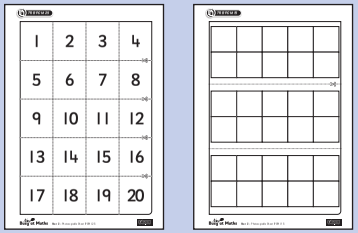
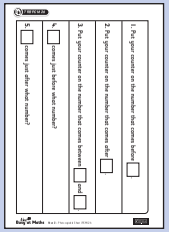
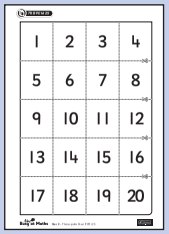
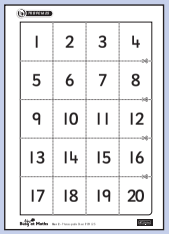
Station 2

Number Strips 20 to 1: Arrange the children in pairs or small groups. Give each pair/group a copy of **PCM 24** which has some number strips of numbers 15–1. Ask the children to cut out the individual number strips. (The strips could be enlarged and photocopied on to A3 paper, if possible. These can be laminated and stored for use later in the year.) Using a whiteboard marker/pencil, the children must fill in the missing numbers on the strips. When finished, the children must rub out their answers and move onto a new strip, completing as many as possible in the time allotted.
Differentiation: Children may use their number strip (15–1) to help them if they find the task difficult, but the aim is to move away from using this aid when the children are ready.



Station 3

Estimate and Count: For this activity, it is best if the children work in pairs. Each pair needs a whiteboard/bowl/plate/box and 15 similar objects in it (pom poms/counters/cubes/buttons/beads/shells/conkers, etc.). Child A closes his/her eyes. Child B must place any number of the objects (1–15) onto their whiteboard. When ready, Child A opens his/her eyes and looks at the whiteboard for three seconds and estimates the number of objects on the whiteboard. He/she must then write down how many objects he/she thinks there are. Together, they must count the objects and check if the estimate was correct, close to or far away from the actual count. Take turns.
Differentiation: Some groups may focus on oral estimates rather than written estimates.

Station 4	**Ten Frame Teen Numbers:** For this activity, it is best if the children work in pairs. Each pair needs numeral cards 10–15 from **PCM 25** which have been cut out and placed upside down on the table. (Only use the numeral cards 10–15. The numerals 16–20 will be needed in the next chapter.) They also need two ten frames (**PCM 15**) and different coloured counters. Child A must turn over a numeral card, e.g. 12. He/she should use 10 counters of the same colour to complete the first ten frame. Child B must complete the number 12 by placing two green (any colour will suffice) counters on the second ten frame. Ensure that the children fill the ten frames correctly by always starting at the top left. **Differentiation:** Mixed-ability pairs will be of help to children who might find this task difficult. 
Station 5	**Fast Tweezers:** For this activity, it is best if the children work in pairs. Each pair needs 15 pom poms placed between them. Each child needs a pair of tweezers and a bowl/box/paper plate/empty lunchbox/coffee carton, etc. On an agreed signal, e.g. one child says 'Go!', the children must race to pick up as many pom poms as they can, one at a time, and place them in their container. When they are finished, the children must write the partition sentence on their whiteboards, showing how many pom poms each child got, e.g. 15 = 6 + 9. **Extension:** Change the focus number to any number from 10–15. **Differentiation:** Some pairs may focus on orally identifying the number sentences only.
Station 6	**Number Strip Clues:** Each pair needs a number strip 1–20 (but only go as far as 15), and a counter. Child A starts the game by asking Child B or all of the children in the group, where to put his/her counter, e.g. 'Put your counter on the number that comes before 14.' Take turns. **Differentiation:** Some children might find it difficult to form the instructions. If this is the case, photocopy and cut out the instruction cards from **PCM 26**. The children pick a card at random and insert a focus number into the blank space to form their instruction/question. 
Station 7	**Number Hunt (10–15):** For this activity, it is best if the children work in pairs or small groups. Numeral cards from 10–15 (**PCM 25**) are placed face up on the table. The first child chooses a number and says it aloud. He/she must then find the same numeral in the classroom (e.g. on a number line or working wall), point to it, and show it to their partner before choosing another number. **Differentiation:** Children who are confident with identifying numbers 10–15 may say one more or one less than the number they have chosen. Others may match the numeral on the card to the classroom display, with support. 
Station 8	**Missing Number (10–15):** For this activity, it is best if the children work in pairs or small groups. Numeral cards from 10-15 **(PCM 25**) are placed face up on the table. One child closes his/her eyes while their partner removes one number. The first child then looks at the remaining numbers and must say which number is missing. He/she should say the number aloud and check by looking at the hidden card. **Differentiation:** Some pairs may work with fewer numbers or have support to identify the missing numeral. 

October: Week 2	**Chapter 6** (Numerals 15–20)	**Strand:** Number	**Strand Unit:** Numeration and Counting
Core book: Pages 22–25	**Home/School Links book:** Pages 7–8	**Teacher's Resource book:** Pages 24–26	**PCMs:** 15, 21, 25–28

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, the children should be enabled to:* • use appropriate mathematical language and symbols; • extend, when appropriate, counting in ones and recognition of numbers beyond 10; • develop an understanding of one-to-one correspondence and come to appreciate that the size of a set is given by the last number in the count; • understand that 'teen' numbers are made up of 10 plus another number; • count forward and backwards from different starting points.
Learning Outcome(s)	Demonstrate proficiency in using and applying different counting strategies. Use estimation to quickly determine number values and number calculations. Select, make use of and represent a range of addition and subtraction strategies.
Mathematical Concepts	Estimation and counting strategies can be applied to determine quantities/calculations.

Promoting Maths Talk
Numbers, fifteen, sixteen, seventeen, eighteen, nineteen, twenty, trace, write, count, draw, estimate, ten frames, add, counting on, number strip, problem-solving, equals.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Numerals 15–20 can be found on the Chapter 6 Landing Page.

Station Activities 1–10 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Algebra: Pattern
Number: Combining and partitioning
Shape and Space: Triangles, circles, squares, rectangles, semi-circles

Home Support Sheets
Send **Home Support Sheet 6** home so parents/guardians can help the children with the numerals 15–20.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Ordering Numbers; **Station 2:** Pass the Teddy; **Station 3:** Estimate and Count; **Station 4:** Ten Frame Counting; **Station 5:** Fast Tweezers; **Station 6:** Number Strip Clues; **Station 7:** Addition Cards; **Station 8:** Four-handed Teens; **Station 9:** Combining on the Butterfly; **Station 10:** Combining on the Caterpillar.

Digital Resources: Chapter 6 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interactions – conferencing with the child to ascertain his/her thought process about a specific topic: Numerals 15–20.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
Listen to the Whistle! Teacher blows a whistle from 10–20 times. The children must count the number of blows and write them on their whiteboards or a piece of paper.
Variation: Teacher beats a percussion instrument or places a number of coins into a tin box.

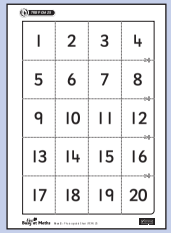
Maths Chat
Look carefully at the number 16. Ask the children to list as many 'facts' as they can about the number 16. For example:
1. It has two digits.
2. It is made up of one and six.
3. It is made of one straight and one curved line.
4. It comes after 15.
5. It comes before 17.
6. It comes between 15 and 17.
Do the same for numerals 15 and 17–20.

Maths Eyes
Ask the children to talk about the places where they might see any of the numerals 15–20 – buses, calendars, mobile phones, birthday cards, trains, train stations, cooker ovens, microwave ovens, calculators, book pages, clock faces, streets, doors, etc.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations

Station 1

Ordering Numbers: Arrange the children in pairs or small groups. Give each child/pair/group a copy of **PCM 25** which has the numerals 1–20 (these may have been cut out for Chapter 5). They must cut out the numeral cards, jumble them and place them in the centre of the table. The children take turns ordering the cards from 1–20, and from 20–1.
Extension: Remove several numbers from the sequenced cards and ask the children in their pairs/groups to identify the missing numbers.
Differentiation: If children are struggling to order correctly, they may use their number strip as an aid.



1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20

Station 2

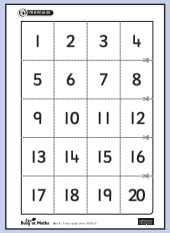
Pass the Teddy: Arrange the children in groups or use this game as a whole class activity. Ask the children to sit in a circle in the classroom/PE hall/playground. The children count forwards from 1–20. One child passes the teddy to the child beside him/her as they count. When they get to 20, the next child must start at one again. Continue the game as many times as possible in the time allowed.
Extension: Count backwards from 20–1. The game can be altered to 'Pass the toy car/pencil case/bottle…' per each round.
Differentiation: If a child is unable to say the next number, the other children say the number together, assisting him/her.

Station 3

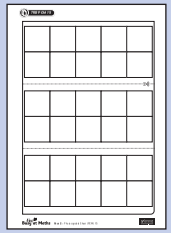
Estimate and Count: For this activity, it is best if the children work in pairs. Each pair needs a whiteboard/bowl/paper plate/box with 20 similar objects in it (pom poms/counters/cubes/buttons/beads/shells/conkers, etc.) Child A closes his/her eyes. Child B must place any number of the objects (1–20) onto their whiteboard. When ready, Child A opens his/her eyes and looks at the whiteboard for 3 seconds. He/she must then write down how many objects he/she thinks there are. Together, they must count the objects and check if the estimate was correct, close or far away from the actual count. Take turns.
Differentiation: Some groups may focus on oral estimates rather than written estimates.

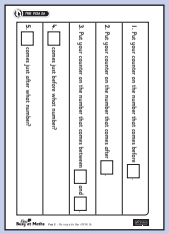
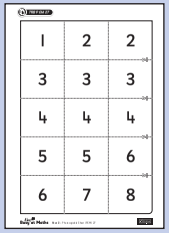
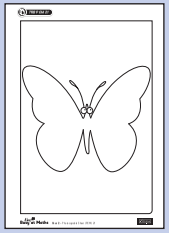
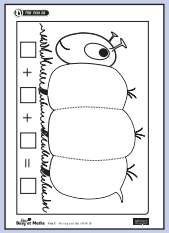
Station 4

Ten Frame Counting: For this activity, it is best if the children work in pairs. Each pair needs numeral cards 16–20 from **PCM 25** which have been cut out and placed upside down on the table. They also need two ten frames (**PCM 15**) and different coloured counters. Child A must turn over a numeral card, e.g. 17. He/she should use ten counters of one colour to complete the first ten frame. Child B must complete the number 17 by placing seven green counters (any colour will suffice) on the second ten frame. Ensure that the children fill the ten frames correctly by always starting at the top left.
Differentiation: Mixed-ability pairs will be of help to children who might find this task difficult.



1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20



Station 5	**Fast Tweezers:** For this activity, it is best if the children work in pairs. Each pair needs 20 pom poms placed between them. Each child needs a pair of tweezers and a bowl/box/paper plate, etc. On an agreed signal, e.g. one child says 'Go!', the children must race to pick up as many pom poms as they can, one at a time, and place them in their own container. When they are finished, the children must write the partition sentence on their whiteboards, showing how many pom poms each child got, e.g. 18 = 9 + 9; 18 = 10 + 8, etc. **Extension:** Change the focus number to any number from 15–20. **Differentiation:** Some pairs may focus on orally identifying the number sentences only.
Station 6	**Number Strip Clues:** Each pair needs a number strip 1–20 and a counter. Child A tells his/her partner where to put his/her counter, e.g. 'Put your counter on the number that comes before 17.' Take turns. **Differentiation:** Some children might find it difficult to form the instructions. If this is the case, photocopy and cut out the instructions cards from **PCM 26**. The children pick a card at random and insert a focus number into the blank space to form their instruction/question. 
Station 7	**Addition Cards:** For this activity, it is best if the children work in pairs. The children need the 15 numeral cards from **PCM 27**. Ask the children to cut out the numeral cards and place them upside down on the table. The children take turns revealing any three of the cards. The children must race to get the total of the three cards, showing the number sentence on their whiteboards, e.g. 8 + 4 + 6 = 18. The totals should not go beyond 20. Take turns. **Differentiation:** Children may work individually or with a partner. They can use their number strips as an aid. 
Station 8	**Four-handed Teens:** For this activity, it is best if the children work in groups of three to make different numbers from 10–20. Child A represents the number ten, so he/she holds up both hands to show ten fingers. Child B can hold up any number of fingers from 0–10 to show the teen numbers. Child C must call out that number, e.g. 19. If he/she gets the correct number, he/she becomes the child to represent the number ten and receives a counter. If he/she gets a wrong answer, he/she loses a counter. The child with the most counters after ten turns wins the game. **Differentiation:** The children could also make numeral cards to go with each representation or write the numerals on pieces of paper/cardboard or Post-it notes.
Station 9	**Combining on the Butterfly:** Give each child in the group a copy of the butterfly from **PCM 21**. Child A shares up to 20 coloured counters on the wings using different addends, e.g. nine red and eight blue (two addends). Child B writes the number sentence at the bottom of the laminated butterfly. **Differentiation:** Children make as many number sentences as they can in the allotted time. 
Station 10	**Combining on the Caterpillar:** Give each child in the group a copy of the caterpillar from **PCM 28**. This can be laminated for multiple uses. Child A shares 15–20 coloured counters on the three sections using different addends, e.g. 4 red, 6 blue and 7 green (three addends). Child B writes the number sentence on the laminated caterpillar, e.g. 4 + 6 + 7 = 17. **Differentiation:** Children make as many number sentences as they can in the allotted time. 

October: Week 3	**Chapter 7** (Pattern 1)	**Strand:** Algebra	**Strand Unit:** Patterns, Rules and Relationships
Core book: Pages 26–29	**Home/School Links book:** Page 9	**Teacher's Resource book:** Pages 27–29	**PCMs:** 29–30

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, the children should be enabled to:* • copy a simple pattern; • continue a simple pattern; • create patterns; • create pictures and patterns with 2-D shapes.
Learning Outcome(s)	Explore, extend and create patterns and sequences.
Mathematical Concepts	There are patterns and sequences to everyday routines and events, from which predictions can be made. A sequence is a list of objects or actions that follow an order. Repeating patterns are made up of units of repeat and do not contain random elements. A pattern is an arrangement of elements organised according to a defined structure or rule.

Promoting Maths Talk
Pattern, sequences, find, groups, what happens next, draw, unit of, repeat, colour, shapes, circle, square, rectangle, triangle, cube, sphere, cuboid.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Pattern 1 can be found on the Chapter 7 Landing Page.

Station Activities 1–8 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Ordinal Number
Data and Chance: Colours
Shape and Space: 2-D Shapes, 3-D Shapes

Home Support Sheets
Send **Home Support Sheet 7** home so that parents/guardians can help the children with patterns in geometric shapes in the environment.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Multi-Links Patterns; **Station 2:** Button Patterns; **Station 3:** Interlocking Cube Patterns; **Station 4:** 2-D Shape Patterns; **Station 5:** More 2-D Shape Patterns; **Station 6:** 3-D Shape Patterns; **Station 7:** Dice Patterns; **Station 8:** Coin Patterns.

Digital Resources: Chapter 7 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interactions – conferencing with the child to ascertain his/her thought process about a specific topic: Pattern 1.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Term 1: October – Week 3

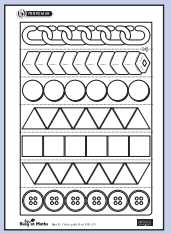
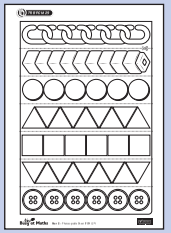
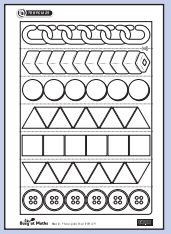
Chapter 7: Helpful Hints – Pattern 1

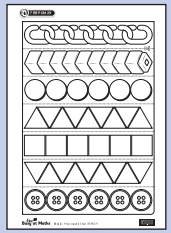
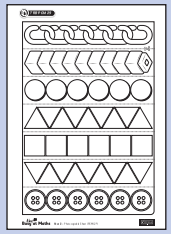
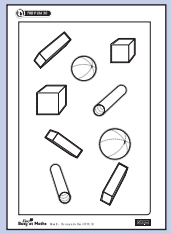
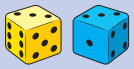
Maths Action – Whole Class Activity
Hold up a number of interlocking cubes or multi-links in a simple pattern – red, blue, green, yellow and red. Ask the children in the class to say what the next element in the pattern is. These patterns can be as simple or as complex as you deem suitable for the class.
This could also be done adding beads on a piece of string.

Maths Chat
Ask the children to talk about where they can see patterns: goal nets, tiles on walls or floors, finger and thumb prints, day following night, the seasons, stripes on a zebra, spots on a giraffe or ladybirds, butterfly wings, curtains, wallpaper, quilts, dresses, etc.

Maths Eyes
Ask the children to look around the classroom or school to see if they can see any patterns: posters, pictures, wallpaper, geometric patterns using cubes, counters, flowers, leaves, butterflies, ladybirds, honeycomb, etc.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations

Station 1	**Multi-Links Patterns:** Give each group some coloured multi-links and ask them to make some simple patterns using two colours, e.g. red, blue, red, blue, etc. You could also give each child in the group a copy of **PCM 29** (rows of blank multi-links, interlocking cubes, counters/circles, triangles, buttons). Ask them to cut out the multi-links and to colour them in different patterns. **Differentiation:** Ask the children to use different colour arrangements, e.g. 2 red, 1 blue, 2 red, 1 blue and get them to ring the repeating patterns.	
Station 2	**Button Patterns:** Give each group some coloured buttons and ask them to make some simple patterns using two colours, e.g. green, yellow, green, yellow, etc. You could also give each child in the group a copy of **PCM 29** (rows of blank multi-links, interlocking cubes, counters/circles, triangles, buttons). Ask them to cut out the buttons and to colour them in different patterns. **Differentiation:** Ask the children to use different colour arrangements, e.g. 2 green, 2 red, 2 green, 2 red and get them to ring the repeating patterns.	
Station 3	**Interlocking Cube Patterns:** Give each group some coloured interlocking cubes and ask them to make some simple patterns using 3 colours, e.g. blue, orange, black, blue, orange, black, etc. You could also give each child in the group a copy of **PCM 29** (rows of blank multi-links, interlocking cubes, counters/circles, triangles, buttons). Ask them to cut out the cubes and to colour them in different patterns. **Differentiation:** Ask the children to draw their own repeating pattern using three colours. Get them to ring the repeating patterns.	

Station 4	**2-D Shape Patterns:** Give each group copies of **PCM 29** and ask them to cut out and colour the circles. They can then make their own patterns using the circles and a range of different colours. They can make patterns using coloured counters before doing this exercise, if necessary. They can do the same activity using the triangles and squares. **Differentiation:** The patterns can be as simple or complex as the children like.	
Station 5	**More 2-D Shape Patterns:** Give each group copies of **PCM 29** and ask them to cut out the circles, triangles and squares. Ask them to make their own patterns using all three shapes. **Differentiation:** Ask the children to use more than one shape and get them to circle the repeating patterns.	
Station 6	**3-D Shape Patterns:** Give each group copies of **PCM 30** and ask them to cut out and colour the different 3-D shapes. They can then make their own patterns using the different shapes and a range of different colours. It would be best to start with one shape and use different colours and gradually increase the difficulty level. **Differentiation:** Ask the children to use more than one shape and get them to ring the repeating patterns.	
Station 7	**Dice Patterns:** Give each group some dice. One child rolls two dice until they get different numbers to start a pattern, e.g. 3 and 2. Continue the pattern by adding the numbers 3 and 2, e.g. 3, 2, 3, 2, 3, 2, 3, 2, 3, 2 … **Variation:** The children can use 3 or 4 nine-sided dice to make the patterns more difficult. **Differentiation:** Make the pattern using 3 dice numbers, e.g. 4, 5, 1, 4, 5, 1, 4, 5, 1 … It can be made more difficult by rolling one die (dice) four times, e.g. 3, 5, 3, 4, 3, 5, 3, 4, 3, 5, 3, 4 …	
Station 8	**Coin Patterns:** Arrange the children in pairs or small groups. Give each pair/group some 1p, 2p, 5p, 10p and 20p coins. Ask the children to make coin patterns, e.g. 1p, 2p, 2p, 5p, 1p, 2p, 2p, 5p, 1p, 2p, 2p, 5p, etc. **Note:** Money is not dealt with formally until Chapter 28. However, the children will have fun making patterns using coins. **Differentiation:** The children can make the patterns as simple or complicated as they like.	

Year 2 Weekly Plan – October: Week 4

October: Week 4	**Chapter 8** (Ordinal Number)	**Strand:** Number	**Strand Unit:** Uses of Number
Core book: Pages 30–31	**Home/School Links book:** Page 10	**Teacher's Resource book:** Pages 30–32	**PCMs:** 31–35

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • explore ordinal number.
Learning Outcome(s)	Develop an awareness that numbers have a variety of uses.
Mathematical Concepts	Numbers describe the position of something in a list such as 1st, 2nd, 3rd (ordinality).

Promoting Maths Talk
Order, ordering, colour, circle, match, first (1st), second (2nd), third (3rd), last, red, green, blue, black.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Ordinal Number can be found on the Chapter 8 Landing Page.

Station Activities 1–5 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Ordinal Number
Data and Chance: Colours
Shape and Space: Spatial Awareness

Home Support Sheets
Send **Home Support Sheet 8** home so parents/guardians can help children with ordinal numbers.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Car Races; **Station 2:** Jigsaw Races; **Station 3:** Beanbag Throw; **Station 4:** What Name? **Station 5:** Colouring Fun.

Digital Resources: Chapter 8 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interactions – conferencing with the child to ascertain his/her thought process about a specific topic: Ordinal Number.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
Choose four children from the class. Give each one an ordinal number name from **PCM 31**. Ask them to stand in order according to their card. It is important to have a pole/chair/line to signify where the first child is as if at a bus stop or in a queue. Ask questions such as: 'Who is in first/second/third/between/last place?' 'Who is between Emma and Mary?' 'Can Ali change places with the person who is last?', etc.

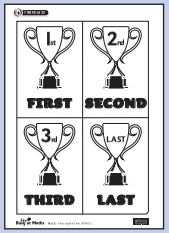
Maths Chat
Talk about where you might see people using ordinal numbers – Olympic events, horseracing, swimming, talent competitions, buses, classes in school, birthdays on the calendar, dates, centuries, kings, queens, popes, floors of buildings, etc.

Maths Eyes
Talk about where you have seen ordinal numbers in use – in your class, at home or in the playground.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations

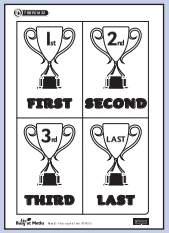
Station 1

Car Races: The children work in groups of four. Give each group a copy of **PCM 32** which has four cards with cups saying 1st, 2nd , 3rd and last. Each child needs a toy car. They all begin from an agreed starting line, e.g. a line of blue masking tape on the floor, and push his/her car once only. When the cars have stopped moving, the children must determine which car came 1st (travelled the furthest), 2nd, 3rd and 4th/last. Each child then takes the card which represents the position of his/her car in the race.
Differentiation: The children swap cars and play again.



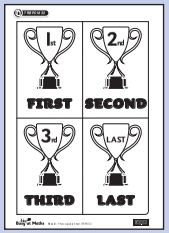
Station 2

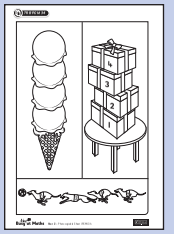
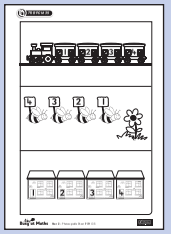
Jigsaw Races: The children work in groups of four. Give each group a copy of **PCM 32** which has four cards with cups saying 1st, 2nd , 3rd and last. Each child needs a jigsaw that is to hand in the class (four jigsaws of equal difficulty work best). The children must all begin making their jigsaws at the same time. The first child to finish takes the '1st' place card. The next child to finish must take the '2nd' card and so on, until all four children are finished.
Extension: The children swap jigsaws and play again. They can play as many times as possible in the allotted time.
Differentiation: If the children are working in similar ability groups, the jigsaws should all contain the same number of pieces. If working in mixed ability groups, the jigsaws should be tailored to the ability of each child.



Station 3

Beanbag Throw: Children work in groups of four. Each group has four cards saying 1st, 2nd, 3rd and last (**PCM 32**), and a hula hoop. Each child has beanbags of the same colour, e.g. Evan has five red beanbags; Beth has five yellow beanbags. The children must stand at an agreed mark, e.g. a line of blue masking tape on the floor. The first child to throw and get all of their beanbags inside the hoop takes the '1st' place card. The next child to finish takes the '2nd' card and so on, until all four children are finished.
Differentiation: Increase/decrease the number of beanbags which must land inside the hula hoop, depending on ability. Similarly, the distance to the hula hoop can be increased/decreased depending on ability.



Station 4	**What Name?** Children work in groups of four, five or six. Give each group a copy of **PCM 33**. Ask the children to cut out the nine name cards and place them upside down in a pile in the centre of the table. The first child must pick up one of the name cards, without the others seeing. He/she must read out the clues on the card. The other children must write the clues in the correct spaces on their whiteboard, spelling out the mystery name. The children take turns reading out the clues. **Differentiation:** The children can work individually or in pairs, depending on ability/confidence. 
Station 5	**Colouring Fun:** Children work in groups of four. Print off the different sets of pictures from **PCM 34** and **PCM 35**. The children each take a picture from the same set, e.g. every child takes the ice-cream picture. The children take turns to say how they would like the ice-cream to be coloured, e.g. Clara: 'The 3rd scoop is chocolate. Colour it brown.' Adam: 'The 1st scoop is strawberry. Colour it pink.' **Differentiation:** The group works to complete as many of the pictures as possible.  

November: Week 1	**Chapter 9** (Time 1)	**Strand:** Measures	**Strand Unit:** Time
Core book: Pages 32–35	**Home/School Links book:** Pages 11–12	**Teacher's Resource book:** Pages 33–35	**PCMs:** 36–50

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • sequence two or three familiar events; • explore time patterns.
Learning Outcome(s)	Develop a sense of time and its uses.
Mathematical Concepts	Events in daily routines can be described and sequenced. A timetable is a useful display to show when things will happen. Calendars display days and months and can be used to highlight times of significance. Time can be expressed and recorded in a variety of ways. Time passes consistently.

Promoting Maths Talk
Trace, draw, days of the week, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, months of the year, January, February, March, April, May, June, July, August, September, October, November, December, seasons of the year, spring, summer, autumn, winter.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Time 1 can be found on the Chapter 9 Landing Page.

Station Activities 1–8 can be completed in small groups on a day of teacher's choice. Note: *Some of these activities mirror the Maths Action/Chat/Eyes above.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting, Ordinal Number

Home Support Sheets
Send **Home Support Sheet 9** home so that parents/guardians can help the children solve problems involving time.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: My Week; **Station 2:** Name the Months; **Station 3:** Months of the Year; **Station 4:** Name the Seasons; **Station 5:** Season Sorting; **Station 6:** Odd-One-Out 1; **Station 7:** Odd-One-Out 2; **Station 8:** Season Sequence.

Digital Resources: Chapter 9 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interactions – conferencing with the child to ascertain his/her thought process about a specific topic: Time 1.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Term 1: November – Week 1

Chapter 9: Helpful Hints – Time 1

Maths Action – Whole Class Activity
The days of the week: Cut out the days of the week from **PCMs 36** and **37**. These can be laminated. Choose seven children to stand at the top of the class each holding up one of the days. Ask the children to stand in order starting with Monday. Children from the class can trade places with those at the top, e.g. Mark trades places with the child holding up Saturday, etc. Do the same with the months of the year using **PCMs 40**, **41** and **42**.

Maths Chat
Talk about the four seasons of the year. Ask the children to talk about the types of activities they like to do during the different seasons. Talk about the different types of weather that is associated with each season.

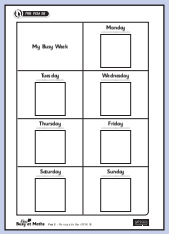
Maths Eyes
Call out the months of the year and ask the children to hold up their hand when their birthday month is called out. The children must count the number of hands raised after each month is called out.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations

Station 1

My Week: Invite the children to draw an activity they do after school each day of the week and at the weekend. There is also the option to cut and paste activities from **PCM 39** on to **PCM 38**. PCM 39 has 16 pictures and the children can pick their favourite pictures to paste on to the two sections of PCM 38.
Differentiation: If children are unsure about which days they complete specific activities, or if they don't complete special activities on certain days, they can be invited to draw/glue in pictures of activities they would like to do.

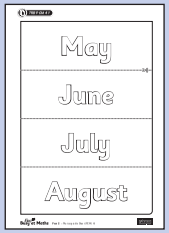




Station 2

Name the Months: Give the children copies of **PCMs 40**, **41** and **42**. Ask them to cut out and colour the individual months.
Differentiation: Ask the children to put the months in order starting with January.

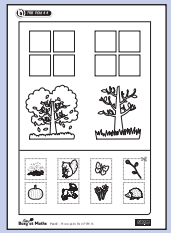
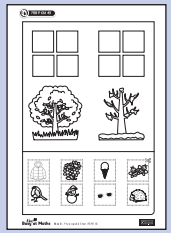
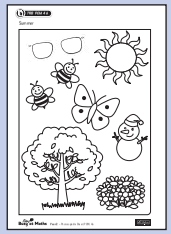
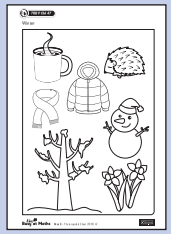
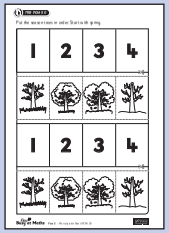






Station 3

Months of the Year: Each pair needs 12 lollipop sticks. Each of the 12 months of the year should be written on a lollipop stick. It is a good idea to colour code the seasons, e.g. March, April, May on pink lollipop sticks and so on. Invite the children to read and order the months of the year and match them to the seasons.
Differentiation: Some of the children can write the month names on the lollipop sticks themselves. It would be a good idea to pair the children in mixed ability literacy groups for this activity. Stronger readers may assist those who require some extra guidance during the activity.
Extension: Invite one child to remove one lollipop stick when his/her partner isn't looking. When the partner opens her/his eyes they must identify the month that has been removed.

Station 4	**Name the Seasons:** Give the children copies of **PCM 43**. Ask them to cut out and colour the individual seasons. **Differentiation:** Ask the children to match the months of the year to the correct season. They place the season on the table. They can then place the correct months under each season, starting with spring.	
Station 5	**Season Sorting:** Give the children copies of **PCMs 44** and **45**. They can work in pairs or in a whole group depending on ability. They must cut out and sort the seasonal activities by pasting them under the correct seasonal tree. **Differentiation:** Some children may focus on all four seasonal trees, while others may focus on only one or two trees.	 
Station 6	**Odd-One-Out 1:** Arrange the children in groups. Give the children in each group copies of **PCMs 46** and **47**. The children must identify the seven pictures associated with both summer and winter and colour them. They can cross out the pictures that do not belong (e.g. a squirrel collecting nuts does not belong in summer). They must justify their answers. **Differentiation:** Some children may focus on one sheet, while others may focus on both sheets.	 
Station 7	**Odd-One-Out 2:** Arrange the children in groups. Give the children in each group copies of **PCMs 48** and **49**. The children must identify the seven pictures associated with both autumn and spring and colour them. They can cross out the pictures that do not belong (e.g. a snowman does not belong in summer). They must justify their answers. **Differentiation:** Some children may focus on one sheet, while others may focus on both sheets.	 
Station 8	**Season Sequence:** Give the children in each group a copy of **PCM 50**. The children must cut out the season pictures and glue them into the correct sequence in the boxes marked 1–4. Ask the children to begin the sequence with spring, i.e. the spring tree is glued into box 1. **Differentiation:** The children can sequence the trees again, starting with a different season each time. Encourage the children to ask their partner/group questions, e.g. 'What season comes before/after spring? What season comes between summer and winter?'	

November: Week 2	**Chapter 10** (Mental Strategies)	**Strand:** Algebra	**Strand Unit:** Patterns, Rules and Relationships
Core book: Pages 36–40	**Home/School Links book:** Pages 13–14	**Teacher's Resource book:** Pages 36–38	**PCMs:** 15, 20–21, 51–57

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • explore pattern in number; • carry out mental calculations such as 1 more/less than up to 20, doubles up to 10 and mentally add and subtract within 10; • understand the concept of addition by combining sets of objects to find 'how many'; • discover the components of numbers within 5/10 by investigating different ways of partitioning sets into subsets practically, talk about the outcomes; • use appropriate mathematical language and symbols; • be involved in solving practical problems.
Learning Outcome(s)	Identify and express relationships in patterns, including growing or shrinking shape patterns and number sequences.
Mathematical Concepts	Properties of operations and patterns in numbers can be used to determine number facts we don't know from number facts we do know – doubles and the number bonds of ten. Properties of operations (e.g. zero, commutative) and patterns in numbers can be used to determine number facts we don't know from number facts we do know. The commutative property of addition means we can swap the order of the numbers being added and still get the same total.

Promoting Maths Talk
Doubles, learn, how many, complete, question, ten frame, solve, bonds of ten, count, colour, combining, add, bridging a ten, pattern, pence.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Mental Strategies can be found on the Chapter 10 Landing Page.

Station Activities 1–7 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Addition

Home Support Sheets
Send **Home Support Sheet 10** home so parents/guardians can help children with mental strategies for addition.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Stations
Station 1: Butterfly Wings; **Station 2:** Doubles Towers; **Station 3:** Ten Frame Doubles; **Station 4:** Towers of Ten; **Station 5:** Ladybird Doubles; **Station 6:** Count the Cards; **Station 7:** Bridging Ten.

Digital Resources: Chapter 10 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Mental Strategies for Addition.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
The Human Number Strip: Ask the children to cut out the digits/numerals 1–20 from **PCMs 51** and **52**. Bring 20 volunteers to the top of the classroom. Each will hold up one of the digit cards. Ask them to order themselves from 1–20 starting with the child with the digit 1. The teacher can invite the children who are sitting down to exchange places with one of the volunteers at the top of the class, e.g. 'Change places with the child holding up 12/10/3/17/20, etc.' 'Change places with the child holding up one more/less than 7, etc.''Change places with the child who is between 5/8/14/18, etc.'

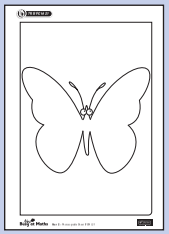
Maths Chat
Ask the children to talk about the different fruit and vegetables they see in the bowls on the IWB. They will discuss different ways the bowls could be combined to make totals within 20 and explain the strategies they used to solve the problem.

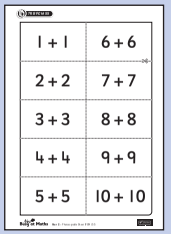
Maths Eyes
Ask the children to look carefully at the bowls of fruit and vegetables on the IWB and identify things they notice, e.g. 'Can you spot any doubles?', 'Which bowls have the same amount?', 'What do you notice about the groups of pieces?'

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Stations

Station 1

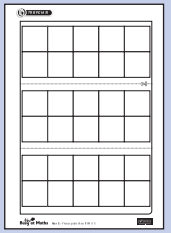
Butterfly Wings: For this activity, it is best if the children work in pairs. Give each pair a copy of **PCM 21**. Ask the children to cut out the 'doubles' cards from **PCM 55** and place them face down in a pile in the centre of the table. Each child will also need ten counters and is 'in charge of' one butterfly wing. The children take turns picking one of the doubles cards. They must use their counters to show the double that they have picked using both wings of the butterfly. They must identify the double and its answer, e.g. 4 + 4 = 8; 6 + 6 = 12; 9 + 9 = 18, etc.
Extension: Children take turns leading the activity. The leader puts down any number of counters between 1–10. Their partner must copy him/her. The children race to call out the double that has been made.
Differentiation: Some children may focus on all the doubles cards up to 20, while others might focus on the doubles up to 10.





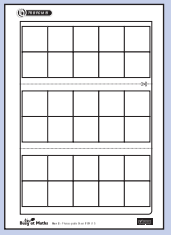
Station 2

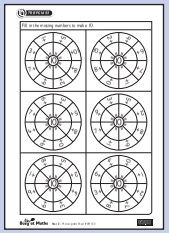
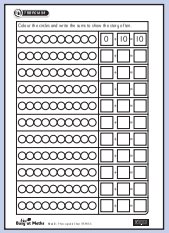
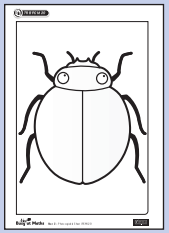
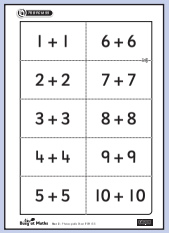
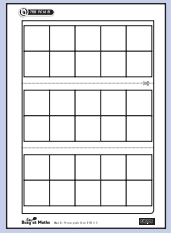
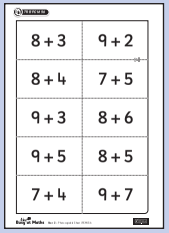
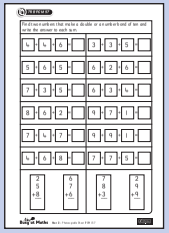
Doubles Towers: For this activity, it is best if the children work in pairs. Each child has 10 Unifix cubes/Lego bricks. Child A makes a tower with any number of cubes (1–10). The other child must copy Child A and make a tower of the same size. The children must put their towers side-by-side and identify the double.
Extension: Children can show the doubles they have made on their ten frames (**PCM 15**) – two ten frames.
Differentiation: Some children may focus on all the doubles cards up to 20, while others might focus on the doubles up to 10.



Station 3

Ten Frame Doubles: For this activity, it is best if the children work in pairs. Each pair needs two ten frames (**PCM 15**) and 10 counters of different colours, e.g. 10 blue counters and 10 red counters. One child places a counter on the ten frame, the other mirrors the action as shown in the diagrams. Children can work through the doubles from 1 + 1 = 2 to 10 + 10 = 20.
Differentiation: Some children may focus on all the doubles cards up to 20, while others might focus on the doubles up to 10.



Station 4	**Towers of 10:** Children work in pairs. One child has 10 blue cubes, the other child has 10 yellow cubes (colours can vary). Child A arranges some (or all) of their cubes into a tower. Child B must add to the tower (if the first child used less than 10 cubes), so that the tower is 10 cubes tall. When complete, the children must identify the number sentence, e.g. 7 + 3 = 10. The children take turns going first. **Extension: PCMs 53** and **54** provides the children with an extra opportunity to practise their knowledge of the number bonds of 10. **Differentiation:** Children can work at their own pace, completing the activity as many times as possible within the time allotted.  
Station 5	**Ladybird Doubles:** The children work in pairs. Each pair needs the ladybird template on **PCM 20**. Ask the children to cut out the doubles cards from **PCM 55** and place them face down in a pile in the centre of the table. Each child will also need ten counters and is 'in charge of' one ladybird section. The children take turns picking one of the doubles cards. They must use their counters to show the doubles. The children must identify the double and its answer, e.g. 4 + 4 = 8, etc. **Extension:** Children take turns leading the activity. The leader puts down any number of counters between 1–10, his/her partner must copy him/her. The children race to call out the double that has been made. **Differentiation:** Some children may focus on all the doubles up to 20, while others might focus on the doubles up to 10.  
Station 6	**Count the Cards:** The children work in small groups. Give each group two suits of the number cards from a pack of cards, i.e. ace to 10. The ace has a value of 1. The cards should be placed face down on the table in front of the children. Child A starts the game by turning over any two cards, e.g. 7 and 9. They must race to count the total value of the two cards. Where possible, they should use the doubles and the number bonds of 10 to help them. **Differentiation:** Children can limit the cards so that there are two of every card between ace to five, only. Some children may turn over and add the totals of three cards.
Station 7	**Bridging Ten:** The children work in pairs. Give each pair a copy of **PCM 15** and a copy of the question cards from **PCM 56**. Ask the children to cut out the cards from PCM 56 and place them upside down in the centre of the table. They also need 20 counters in any two colours. They take turns picking a card, e.g. 8 + 4. They must use their counters to 'make' the sum with two different coloured counters, filling up the first ten frame (PCM 15), and placing the left over counters on the second frame. They must then write the new sum under the ten frames and solve it, e.g. 8 + 4 = 8 + 2 + 2… 10 + 2 = 12; 9 + 3 = 9 + 1 + 2… 10 + 2 = 12; 7 + 8 = 7 + 3 + 5… 10 + 5, etc. **Differentiation:** This is a tricky activity. The teacher should be on hand to help the children who need support. It might be a good idea to have children working in mixed-ability pairs, so that the concept can be modelled for pupils who have difficulty. **Extension:** The children can complete the sums on **PCM 57** using their doubles and number bonds of 10.   

November: Week 3	**Chapter 11** (Length 1)	**Strand:** Measures	**Strand Unit:** Measuring – Length
Core book: Pages 41–44	**Home/School Links book:** Pages 15–16	**Teacher's Resource book:** Pages 39–41	**PCMs:** 58–64

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • compare two objects of different length/weight/capacity/area; understand and use the language of comparison; • order three objects of different length, weight, capacity, area; talk about the ordering using appropriate language; • find an object of similar length, weight, capacity, area; talk about their findings in terms of 'just about the same' length, weight, capacity, area; • use appropriate mathematical language and symbols.
Learning Outcome(s)	Demonstrate an awareness that attributes such as length, weight, capacity and area can be measured and compared.
Mathematical Concepts	Objects have attributes that can be measured such as length, weight, capacity and area. One of the purposes of measurement is to compare.

Promoting Maths Talk
Colour, tall, short, wide, narrow, comparing lengths, draw, longer, shorter, taller, wider, narrower.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Length 1 can be found on the Chapter 11 Landing Page.

Station Activities 1–6 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting
Data and Chance: Colours

Home Support Sheets
Send **Home Support Sheet 11** home so parents/guardians can help children with length.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Which is Long, Longer or Longest? **Station 2:** Which is Tall, Taller or Tallest? **Station 3:** Which is Wide, Wider or Widest? **Station 4:** Which Row is Longer? **Station 5:** Which Ribbon is Wide, Wider or Widest? **Station 6:** Draw Something That Is...

Digital Resources: Chapter 11 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Length 1
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Term 1: November – Week 3

Chapter 11: Helpful Hints – Length

Maths Action – Whole Class Activity
Ten Second Towers: Each child has ten seconds to make their own tower from Uni-fix cubes or Lego bricks. When time is up, line them up in order from the shortest to tallest/longest and from the widest to narrowest. Children can make up their own questions to ask the other children, e.g. 'Who made the tallest/shortest/longest tower?' 'Whose tower is shorter than Sofia's tower?', etc.

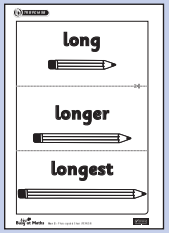
Maths Chat
Ask each child in the class/group to write his/her name on the strip of paper provided (any strips of paper will do). Then, ask each child to cut the unused part of the paper strip off. The children work with their group to line their name strips up in order from shortest to longest. The children should chat about who has the longest/shortest names and justify the reasons for their decisions.

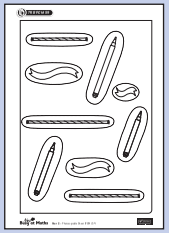
Maths Eyes
Ask the children if they spy something in the class that is wider than... ?
The children should listen to the teacher asking the first few questions. This will act as a guide. They can try it with their group. Then they can play using the words narrower/wider than.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations

Station 1

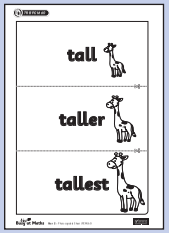
Which is Long, Longer or Longest? Arrange the children in small groups. Give each child a copy of **PCM 58**. Then, give them a copy of **PCM 59** and ask them to cut out the individual objects. Ask them to place the similar objects lengthways, and compare their lengths, e.g. place the straws side-by-side to compare them to see which is long, longer or longest.
Differentiation: The children can colour the long, longer and longest objects different colours.

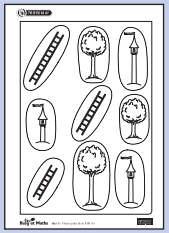




Station 2

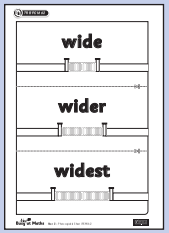
Which is Tall, Taller or Tallest? Arrange the children in small groups. Give each child a copy of **PCM 60**. Then give them a copy of **PCM 61** and ask them to cut out the individual objects. Ask them to place objects vertically and compare their heights, e.g. place the ladders side-by-side to compare them to see which is tall, taller or tallest. They can be placed horizontally to show long, longer or longest!
Differentiation: The children can colour the tall, taller or tallest objects different colours.

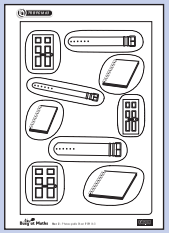


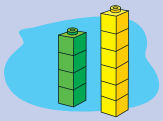
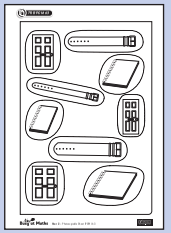
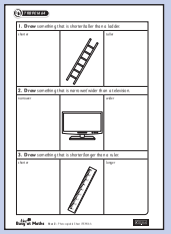


Station 3

Which is Wide, Wider or Widest? Arrange the children in small groups. Give each child a copy of **PCM 62**. Then give them a copy of **PCM 63** and ask them to cut out the individual objects. Ask them to to place objects vertically or horizontally and compare their widths, e.g. place the doors side-by-side to compare them to see which is wide, wider or widest.
Differentiation: The children can colour the wide, wider or widest objects in different colours.





Station 4	**Which Row is Longer?** Give the children some interlocking cubes of three different colours. Ask them to make a red row of five cubes, a green row of seven cubes and a yellow row of 10 cubes. They can then place the rows together to see which row is longer/shorter/shortest. They can ask each other questions about the rows. They can go to 10 as they are only counting! **Extension:** Ask them to place the rows vertically rather than horizontally and they can use the words tall/short/taller/shorter/tallest/shortest. **Differentiation:** The rows of cubes can be longer using more cubes up to a maximum of 20. 
Station 5	**Which Ribbon is Wide, Wider or Widest?** Ask the children to make ribbons/pieces of paper, of different widths and lengths. The children in the group can make up their own questions about the ribbons. **Differentiation:** Give each child a copy of **PCM 63**. Ask them to cut out the objects and to place them vertically and then horizontally. They can use the words wide, wider or widest. 
Station 6	**Draw Something That Is...** Children work in pairs. Each pair needs a copy of **PCM 64**. Invite the children to look at the picture of the ladder in question 1. The children must discuss things that are shorter than the ladder in real life, and things that are taller than a ladder. They must agree upon and draw one object that is shorter and one object that is taller than a ladder. They complete questions 2 and 3 in a similar fashion. **Differentiation:** Some children will complete all three questions, while others might focus on question 1 only. 

December: Week 1	**Chapter 12** (Combining 2)	**Strand:** Number	**Strand Unit:** Sets and Operations
Core book: Pages 45–47	**Home/School Links book:** Pages 17–18	**Teacher's Resource book:** Pages 42–43	**PCM:** 25

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • understand the concept of addition by combining sets of objects to find 'how many'; • extend, when appropriate, understanding of numbers beyond 10; • understand that 'teen' numbers are made up of 10 plus another number; • use appropriate mathematical language and symbols.
Learning Outcome(s)	Recognise and understand what happens when quantities (sets) are combined.
Mathematical Concepts	Quantities (or sets) can be combined. Adding a natural number to a natural number makes the number (quantity) bigger.

Promoting Maths Talk
Combining, colour, sums, answers, plus, equals, twenty frame.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Combining 2 can be found on the Chapter 12 Landing Page.

Station Activities 1-5 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting, Numeration
Data and Chance: Colours

Home Support Sheets
Send **Home Support Sheet 12** home so parents/guardians can help children with combining.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Combining Dice Numbers; **Station 2:** Combining Finger Numbers; **Station 3:** Combining Numbers on the Twenty Frame;
Station 4: Combining Numbers using Cubes; **Station 5:** Add it up!

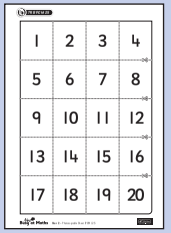
Digital Resources: Chapter 12 Landing Page

Assessment:	**1.** Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress. **2.** Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation). **3.** Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Combining 2. **4.** Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
Show Me the Total: Hold up a small number of objects in one hand (for example, 5–8 cubes, Lego bricks, counters, buttons, or pencils) and ask the children to count them. Then hold up another small group of objects in your other hand. Ask the children to combine the two groups and work out the total. Children can record the number sentence on their whiteboards, e.g. 7 + 6 = 13, or say it aloud together. Finally, count all the objects as a class to check the answer.

Maths Chat
Talk about different ways to combine two numbers to make a total up to 20. Choose a target number, such as 12, and ask, "What two numbers could we combine to make 12?" Encourage children to suggest combinations such as 7 + 5, 8 + 4 or 6 + 6, and explain how they know. If children are ready, extend to combining three numbers to make the same total.

Maths Eyes
Look for examples of two groups being combined in everyday situations, such as 5 children on one side of the playground and 4 on the other, or 6 red pencils and 3 blue pencils. Ask, "What do you notice?" and "How many are there altogether?" Encourage children to explain how they could represent the situation as a number sentence. If children are ready, challenge them to spot three groups that could be combined.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations	
Station 1	**Combining Dice Numbers:** Arrange the children in pairs or small groups. Give each group three six-sided dice. Ask them to throw all three dice together and then add the totals. Encourage them to say the number sentence aloud and check their answers with their partner or group. **Differentiation:** The children can write out the number sentences or vertical sums, as on page 46 of the Core book. Some children may use practical resources such as counters or a number line to support their addition.
Station 2	**Combining Finger Numbers:** Ask the children to work in pairs or small groups. Two children each represent a number using their fingers, e.g. one child holds up 7 fingers and the other child holds up 8 fingers. The rest of the group identify the two numbers shown and add them together, working with totals up to 20. **Differentiation:** The children can write out the number sentences, e.g. 4 + 2 = 6.
Station 3	**Combining Numbers on the Twenty Frame:** Arrange the children in pairs or small groups. One child has a twenty frame and some coloured counters. This child uses the coloured counters to make a sum, e.g. 8 red and 6 green. He/she asks the other children to combine the totals, e.g. 8 + 6 = 14. **Differentiation:** The children can write out the sums as on page 47 of the Core book.
Station 4	**Combining Numbers using Cubes:** Arrange the children in pairs or small groups. Give each group a number of interlocking cubes/Lego bricks/multi-links, etc. Ask the children to make different combinations of numbers up to 20, e.g. 10 + 10 = 20; 8 + 7 = 15, etc. These cubes can be placed either horizontally or vertically. **Differentiation:** Ask the children to create their own addition questions using different coloured cubes, e.g. 9 (red) + 6 (green) = 15; 12 (blue) + 5 (yellow) = 17, etc. Some children can be encouraged to find different combinations that make the same total up to 20.
Station 5	**Add It Up!** Children work in pairs or small groups. Using **PCM 25**, each child chooses either two or three numbers and adds them together. They record the number sentence on their whiteboards, e.g. 6 + 5 + 3 = 14. Another child then takes a turn, choosing a different combination of numbers. **Differentiation:** Some children may focus on combining just two numbers at first, while others can combine three numbers or try to find different combinations for the same total.  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

December: Week 2	**Chapter 13** (2-D Shapes)	**Strand:** Shape and Space	**Strand Unit:** Shape
Core book: Pages 48–52	**Home/School Links book:** Page 19	**Teacher's Resource book:** Pages 44–45	**PCMs:** 65–67

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • explore and talk about shapes in the environment; • talk about the properties of 3-D and 2-D shapes using appropriate mathematical language; • describe and name common 3-D and 2-D shapes; • sort for one criterion using one property materials and talk about the arrangement; • create pictures and patterns with 2-D shapes.
Learning Outcome(s)	Explore and recognise properties of 2-D shapes.
Mathematical Concepts	2-D shapes can be classified and sorted by their appearance and by simple properties. 2-D shapes are flat. They have two dimensions: length and width. Shapes can be combined to make other shapes and/or structures.

Promoting Maths Talk
Shapes, colour, circle, count, cross out, square, triangle, rectangle, how many, straight, curved.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for 2-D Shapes can be found on the Chapter 13 Landing Page.

Station Activities 1-5 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting
Data and Chance: Colours

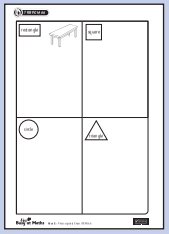
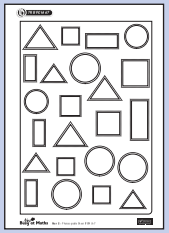
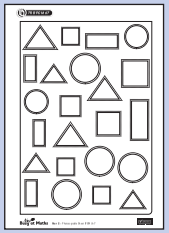
Home Support Sheets
Send **Home Support Sheet 13** home so parents/guardians can help children with 2-D shapes.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Shape Trail; **Station 2:** Making Squares and Rectangles; **Station 3:** Making Triangles and Circles; **Station 4:** Shape Pictures; **Station 5:** Real-life Shapes.

Digital Resources: Chapter 13 Landing Page

Assessment:	**1.** Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress. **2.** Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation). **3.** Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: 2-D Shapes. **4.** Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity	**Maths Chat**	**Maths Eyes**
Give each child in the classroom a copy of **PCM 65**. Ask them to trace and colour the shape names rectangle, square, circle and triangle. They can source some of these 2-D shapes in the classroom and stick the correct shape name under them.	Talk about the different shapes (circles, triangles, rectangles and squares) that can be seen in the classroom, school, playground or at home, e.g. windows, doors, radiators, whiteboard, tables, television, mobile phones, table tops, shelves, etc.	Play Shape Eye Spy. "I spy with my little eye, something that is a shape with 4 sides and 4 corners." Can the children guess the shape? Take turns choosing a shape for others to find.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations	
Station 1	**Shape Trail:** Arrange the children in pairs or small groups. Each child needs a copy of **PCM 66**. The children must find examples of objects that are shaped like a square, a rectangle, a circle and a triangle in the classroom. They must chat about their examples and draw small pictures of these objects in the spaces provided on PCM 66. **Differentiation:** The children can complete PCM 66 individually, in pairs or as a group, depending on ability/confidence. 
Station 2	**Making Squares and Rectangles:** Arrange the children in pairs or small groups. Each pair/group needs a selection of materials, e.g. lollipop sticks, headless match sticks, string, playdough, pipe cleaners, straws. The children must make different examples of squares and rectangles of different sizes. **Differentiation:** You can ask the group to focus on squares only or rectangles only.
Station 3	**Making Triangles and Circles:** Arrange the children in pairs or small groups. Each pair/group needs a selection of materials, e.g. lollipop sticks, headless match sticks, string, playdough, pipe cleaners, straws. The children must make different examples of triangles and circles of different sizes. **Differentiation:** You can ask the group to focus on triangles only or circles only.
Station 4	**Shape Pictures:** Arrange the children in small groups. Each group needs a large selection of 2-D shapes (squares, rectangles, circles and triangles) or shapes cut out from **PCM 67**. The children must use these shapes to create shape pictures. Encourage them to be as creative as they can! They can also make robots, clowns, scarecrows, castles, etc. **Extension:** The children can colour the shape pictures they make. **Differentiation:** Some children may find creating a picture with the shapes challenging. If needed, encourage them to simply arrange the shapes on a page in any pattern or design of their choosing. As their confidence develops, they can begin to combine the shapes to create recognisable pictures. 
Station 5	**Real-life Shapes:** Arrange the children in small groups. Each group needs a pile of squares, a pile of rectangles, a pile of circles and a pile of triangles (photocopied and cut from **PCM 67**). Ask the children to focus on the square first. They should use their pencils and colours to change this square into a 'real' object. Before they do so, encourage each child to give an example of an object that is square shaped, e.g. 'I might turn the square into a present, rug, television, die, board game, box, book, house, handbag…' **Extension:** All the square pictures could be stuck onto a poster to be displayed in the classroom. **Differentiation:** Each group will progress at their own speed. Some groups will complete the activity for all four shapes, while other groups might only complete one shape. 

December: Week 3	**Chapter 14** (Place Value 1)	**Strand:** Number	**Strand Unit:** Place Value and Base Ten
Core book: Pages 53–57	**Home/School Links book:** Page 20–21	**Teacher's Resource book:** Pages 46–47	**PCMs:** 51–52

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • understand that 'teen' numbers are made up of 10 plus another number; • use appropriate mathematical language and symbols; • extend, when appropriate, understanding of numbers beyond 10; • understand the concept of addition by combining sets of objects to find 'how many'.
Learning Outcome(s)	Understand that digits have different values depending on their place or position in a number. Use estimation to quickly determine number values and number calculations.
Mathematical Concepts	The value of a digit in a number depends on its place. When ten place value units (e.g. ones) are grouped, a new place value unit (e.g. ten) is formed. The position of a digit denotes a value ten times that of the digit to its right.

Promoting Maths Talk
Place value, number sentence, ten, teen numbers, match, oldest, youngest.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Place Value 1 can be found on the Chapter 14 Landing Page.

Station Activities 1–6 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting, ordinal number

Home Support Sheets
Send **Home Support Sheet 14** home so parents/guardians can help children with place value.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Make Ten – Activity A/Activity B; **Station 2:** Multi-link Tens; **Station 3:** Cube Tens; **Station 4:** Four-handed Teens; **Station 5:** Making Two Tens; **Station 6:** Number Fan Teens.

Digital Resources: Chapter 14 Landing Page

Assessment:	**1.** Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress. **2.** Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation). **3.** Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Place Value 1. **4.** Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
Each child/pair should have a number fan or digit cards 1–19 from **PCMs 51** and **52**. Call out any number from 1–19, e.g. 18. The children will hold up the number 18 on the number fan or hold up the digits 1 and 8 if using the digit cards. For this activity, ask a range of prompts, for example:
'Show me the number 7/9/12/15/19.'
'Show me the number that comes just before 8/11/14/17.'
'Show me one 10 and three units/one 10 and nine units.'

Maths Chat
Ask the children to take a look at the number 18. Ask them the following questions:
1. 'Would you get more stickers for the 1 or the 8? Explain.'
2. 'Let's make the number 18 using Dienes blocks. Wouldn't you think that the 8 should come before the ten?'
3. 'Let's look at 16, is this the same?'
4. 'Why do you think the teen numbers start with 1?'

Maths Eyes
1. Ask the children to look at their ruler. Ask them to discuss the teen numbers that they see with their partner.
2. Maths Interactive Game: Look at the ruler showing the numbers from 10 to 20. Look at the 1 ten and 4 units appear on screen. Move the arrow to 14 on the ruler.
3. Look at the calendar for teen numbers.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations	
Station 1	**Make Ten** **Activity A:** Give each child/pair/group a paper plate and some materials from their environment, e.g. pasta shapes/toy cars/cubes, etc. Invite the children to place 10 items from the environment on the paper plate. Invite the children to say, 'I have made a group/bundle of 10.' Get the children to place the numeral 10 beside it. **Activity B:** Ask the children to use pieces of string/elastic bands to bundle 10 straws/lollipop sticks/crayons, etc. together. Invite them to say, 'I have made one group/bundle of 10.' Get the children to place the numeral 10 beside it.
Station 2	**Multi-link Tens:** Child A places between 10 and 19 multi-links on a paper plate, e.g. 14 multi-links. Child B has to make 10 with the multi-links (chain) and place the other four remaining multi-links on the table. He/she must say the following, 'There are 14 multi-links altogether – 10 multi-links on the paper plate and four on the table… 10 + 4 = 14, or one 10 and 4 units.' The children continue taking turns at calling different teen numbers (13–19). **Differentiation:** The children can work in mixed-ability pairs, where one child can benefit from modelling by another child.
Station 3	**Cube Tens:** Child A places between 10 and 19 interlocking cubes on the table, e.g. 17 interlocking cubes. Child B has to make 10 with the interlocking cubes and place the other seven remaining cubes on the table. He/she must say the following, 'There are 17 interlocking cubes altogether – 10 cubes standing and seven on the paper plate… 10 + 7 = 17 or one 10 and seven units'. The children continue taking turns at calling a different teen number. **Differentiation:** The children can work in mixed-ability pairs, where one child can benefit from modelling by another child.
Station 4	**Four-handed Teens:** The children work in pairs to make the numbers 11–19 using their fingers. Child A holds up both hands to make 10 fingers. Child B holds up the correct number of fingers to make up the rest of the number. **Differentiation:** The children could also make numeral cards to go with each representation or write the numerals on pieces of paper/cardboard or Post-it notes.
Station 5	**Making Two Tens:** One child shows a teen number using multi-links/cubes etc. The other children in the group must discuss how many more cubes are needed to make two tens. **Differentiation:** The children can record the number sentence to show how many more are needed to make 20.
Station 6	**Number Fan Teens:** For this activity, it is best if the children work in pairs/small groups to make the numbers 11–19 using their number fans. Child A becomes the leader and makes a teen number on his/her number fan, e.g. 17. He/she shows it to the rest of the group. The first child to put up his/her hand and gets the number correct wins a counter. The child with the most counters after five games wins. **Differentiation:** The children can write the numbers on their whiteboards or on an A4 sheet of paper.

January: Week 1	**Chapter 15** (Data)	**Strand:** Data and Chance	**Strand Unit:** Data
Core book: Pages 58–60	**Home/School Links book:** Page 22	**Teacher's Resource book:** Pages 48–50	**PCMs:** 68–73

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • sort for one criterion using three/four-property collections, find the various possibilities, explain their work; • sort and re-sort materials, recording the outcomes in a variety of ways; • talk about data represented in simple block graphs, tables and diagrams; • compare sets by matching objects/counting objects to understand the terms 'more than', 'less than', 'the same'.
Learning Outcome(s)	Explore, interpret and explain data in a variety of ways for a range of purposes.
Mathematical Concepts	Data can be collected and represented in many ways. Data displays (e.g., tables, picture graphs, block graphs) are a useful way of conveying information. Data is all around us and helps us interpret the world. A data set is a collection of information that can provide answers to questions we ask.

Promoting Maths Talk
Pictograms, count, colour, shapes, triangles, rectangles, circles, squares, block graphs.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Data can be found on the Chapter 15 Landing Page.

Station Activities 1–5 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting, Comparing and Ordering

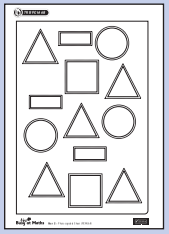
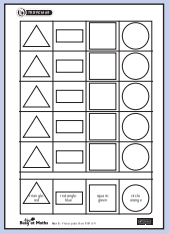
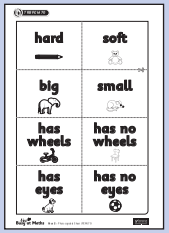
Home Support Sheets
Send **Home Support Sheet 15** home so parents can help the children with pictograms and block graphs.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Sorting by Colour; **Station 2:** Paperclip Snakes; **Station 3:** 2-D Shape Sorting; **Station 4:** Toy Sorting; **Station 5:** Lucky Dip.

Digital Resources: Chapter 15 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how s/he feels about his/her progress.
2. Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interactions – conferencing with the child to ascertain his/her thought process about a specific topic: Data.
4. Assessment events – formal, designed tests, as in the assessment booklet, testing the children at the end of each term.

Maths Action – Whole Class Activity	**Maths Chat**	**Maths Eyes**
Arrange the children in table groups. Give each group up to five multi-links, interlocking cubes, Lego bricks, coins, buttons, shells, etc. Now ask them to place a smaller row of different coloured counters underneath in one-to-one correspondence. They can compose a number of questions about the rows, e.g. Which row has more or less/fewer? How many more are in the top/bottom row?	Talk about different places where we might see pictograms all around us.	Ask the children to look around the classroom or playground and count the objects shaped like triangles, circles, squares and rectangles that they can see.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations	
Station 1	**Sorting by Colour:** Arrange the children in small groups. Give each group a large selection of classroom objects in three striking colours, e.g. red, yellow and blue. These objects might include crayons, cubes, Lego bricks, pom poms, beads, cars, lollipop sticks or paperclips. The children must sort the objects into bowls, baskets or coloured card, by colour. **Differentiation:** Reduce/increase the number of focus colours depending on ability.
Station 2	**Paperclip Snakes:** Arrange the children in pairs or small groups. Place paperclips or multi-links of two different colours in a bowl. Each child must choose a colour, and make a 'snake' using those coloured clips/links. Encourage the children to compare their snakes, placing them alongside each other. **Note:** The children must place their snakes at the same starting point. Which snake is longer/shorter? How many more or less/fewer clips/links does your snake have? **Extension:** Increase the number of colours for making 'snakes' to four or five. **Differentiation:** Have six bowls of paperclips or links prepared for use. Some children might only complete one or two bowls, while some might finish all six.
Station 3	**2-D Shape Sorting:** Arrange the children in small groups. Provide each group with a selection of commercial 2-D shapes, e.g. three circles, five triangles, three rectangles and two squares. If you do not have commercial shapes, you can print shapes from **PCM 68**. The children must cut out the shapes and sort them into their shape families on PCM 68. When they are sorted, the children must colour in their results on **PCM 69**. **Differentiation:** The children can complete PCM 69 in pairs or individually, depending on ability/confidence.  
Station 4	**Toy Sorting:** Arrange the children in small groups. Provide the group with a selection of toys and two hula hoops. Place a heading into each hoop, taken from **PCM 70**, e.g. 'hard' and 'soft'; 'big' and 'small'; 'has wheels' and 'has no wheels' and 'has eyes' and 'has no eyes'. The children must sort the toys into the correct hoops. **Differentiation:** When the children have finished sorting, they can change the headings and re-sort the toys accordingly. Some children may complete one sorting game, while others might complete all four. 

Station 5

Lucky Dip: Arrange the children in groups of three or four. Each group will need an opaque bag with five red cubes and five green cubes. The children must take turns picking a cube randomly from the bag (***until everyone has had a turn***). If a child picks a red cube, everyone in the group must colour in a red cube on the pictogram on **PCM 71**. The children should form the cubes into towers, and notice how the same pattern is emerging on their pictograms.

Note: Each child should pick a cube twice only. We do not want all the cubes to be picked, or the answer will undoubtedly be five red and five green!

Extension 1: Invite the children to talk about the results of their pictograms, e.g. 'Which coloured cube was picked most/least often? How many more blue cubes were picked than red cubes? What colours do you think are left in the bag?'

Extension 2: PCM 71 requires using five red, five green and five blue cubes. This time the children should have two turns at picking cubes from the bag. **PCM 73** requires using five red, five green, five blue and five yellow cubes. This time the children should have three turns at picking cubes from the bag.

Differentiation: Children can complete the activities outlined on either **PCMs 71**, **72** or **73**.

January: Week 2	**Chapter 16** (3-D Shapes)	**Strand:** Shape and Space	**Strand Unit:** Shape
Core book: Pages 61–64	**Home/School Links book:** Page 23	**Teacher's Resource book:** Pages 51–53	**PCMs:** 74–77

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • explore and talk about shapes in the environment; • talk about the properties of 3-D and 2-D shapes using appropriate mathematical language; • investigate and talk about the properties of shapes; • describe and name common 3-D and 2-D shapes; • build and make models with 3-D shapes.
Learning Outcome(s)	Explore and recognise properties of 3-D shapes.
Mathematical Concepts	3-D shapes can be classified and sorted by their appearance and by simple properties. 2-D shapes are flat. They have two dimensions: length and width. 3-D shapes, or solids, have three dimensions: length, width and depth. Shapes can be combined to make other shapes and/or structures.

Promoting Maths Talk
3-D shapes, cube, cuboid, cylinder, sphere, name, colour, read, trace, flat/curved face, square, rectangle, circle, can roll/stack.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for 3-D Shapes can be found on the Chapter 16 Landing Page.

Station Activities 1–6 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations. Give the children copies of **PCM 77**, which has a fun quiz involving 3-D shapes. You may have to read out the questions where required.

Linkage
Number: Counting
Algebra: Pattern

Home Support Sheets
Send **Home Support Sheet 16** home so that parents/guardians can help the children with 3-D shapes.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Shape Trail; **Station 2:** Making 3-D Shapes; **Station 3:** Shape Sorting; **Station 4:** Playdough Faces; **Station 5:** Roll or Stack? **Station 6:** Flat or Curved Faces?

Digital Resources: Chapter 16 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: 3-D Shapes.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Term 2: January – Week 2

Chapter 16: Helpful Hints – 3-D Shapes

Maths Action – Whole Class Activity
Place a number of small 3-D shapes in a 'feely bag': cubes, cuboids, spheres and cylinders. Ask one child to place his/her hand in the 'feely bag' and hold one shape. He/she then describes the shape to the rest of the class. For example, if it is a cube, he/she could say: 'It is solid. It has six flat faces, it has eight corners. All the faces are the same size.' The child who answers the name of the correct shape gets to describe the next shape.

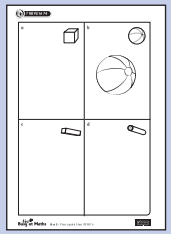
Maths Chat
Talk about the different 3-D shapes you can see in your classroom, school, playground or at home: tins, glasses, tennis balls, footballs, ice cubes, dice, stock cubes, Rubix cubes, pipes, presents, shoe boxes, books, bricks, blocks, etc. Are there any similarities/differences between them?

Maths Eyes
Go on a Shape Walk and find examples of these shapes in your school.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations

Station 1

Shape Trail: Arrange the children in pairs. Give each child/pair a copy of **PCM 74**. The children must find examples of objects that are shaped like a cube, cuboid, sphere and cylinder in the classroom (or larger school area). They must chat about their examples and draw pictures of these objects in the spaces provided.
Differentiation: Children can complete PCM 74 individually, in pairs or as a group, depending on ability/confidence.

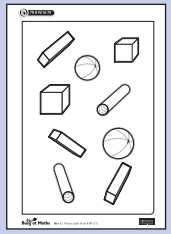


Station 2

Making 3-D Shapes: Arrange the children in pairs or small groups. Give each pair/group a selection of materials, e.g. lollipop sticks, headless matchsticks, string, playdough, straws, pipe cleaners, shells and buttons. They must make different examples of cubes, cuboids, spheres and cylinders of different sizes.
Differentiation: Ask the pairs/groups to focus on one 3-D shape only. Or limit the children to one focus material only, e.g. playdough.

Station 3

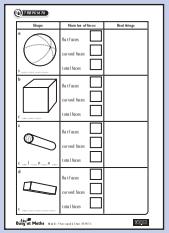
Shape Sorting: Arrange the children in small groups. Each group needs a selection of 3-D shapes (cubes, cuboids, spheres, cylinders). These could be commercial 3-D shapes, or shapes from the environment (e.g. a marble, can of beans, Rubik's cube, shoe box, Jenga bricks).
The children must sort the shapes into their shape families. The children could also cut out the shapes on **PCM 75** and sort them into sets of cubes, cuboids, sphere and cylinders.
Differentiation: If the activity is too easy, invite the children to sort the shapes by other criteria, e.g. by colour, has/hasn't a flat face, can/can't roll, can/can't stack.



Station 4

Playdough Faces: Arrange the children in small groups. Each group needs a large selection of 3-D shapes (cubes, cuboids, spheres and cylinders) and playdough. The children can explore the relationship between 3-D shapes and 2-D shapes by pushing the faces of the 3-D shapes into playdough and observing the 2-D shape prints left in the playdough.
Differentiation: The children work at their own pace. Some children will explore the different shape outlines of all four 3-D shapes, while others might explore only one or two of the 3-D shapes.



Station 5	**Roll or Stack?** Arrange the children in small groups. Each group needs a selection of 3-D shapes (cubes, cuboids, spheres and cylinders). Encourage the children to play with the shape, testing which shapes can roll smoothly along the table/floor and which can be formed into a steady tower. **Differentiation:** You could focus the group on one task at a time, e.g. test whether or not each shape can roll. If time allows, the children can move on to test whether or not each shape can stack.	
Station 6	**Flat or Curved Faces?** Give each child in the group a copy of **PCM 76**. Ask the children to complete the questions in the centre column. Ask them to talk about real-life objects with these four shapes and to draw them in the third column. **Differentiation:** Some children may concentrate on one or two shapes only.	

January: Week 3	**Chapter 17** (Transformation)	**Strand:** Shape and Space	**Strand Unit:** Transformation
Core book: Pages 65–67	**Home/School Links book:** Page 24	**Teacher's Resource book:** Pages 54–55	**PCMs:** 78–79

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • understand and use a range of positional words; • use appropriate mathematical language and symbols.
Learning Outcome(s)	Explore the effects of shape movements.
Mathematical Concepts	A shape's position, orientation or size can be changed without changing the kind of shape it is. The movement of shapes and objects can be described using simple words such as flip, turn and slide.

Promoting Maths Talk
Colour, draw, push, object, shape, cube, cuboid, cylinder, triangle, square, slide, flip.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Transformation can be found on the Chapter 17 Landing Page.

Station Activities 1–5 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting
Shape and Space: 2-D Shapes, 3-D Shapes

Home Support Sheets
Send **Home Support Sheet 17** home so that parents/guardians can help the children solve problems involving transformations.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Follow the Leader; **Station 2:** Making Jigsaws; **Station 3:** Moving 3-D Shapes; **Station 4:** Tower Building; **Station 5:** Move and Trace.

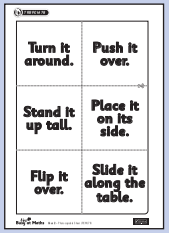
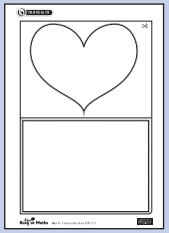
Digital Resources: Chapter 17 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Transformation.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
Each person in the whole class/group needs an identical object, e.g. a pencil, crayon, toy car or teddy.
Place your identical object in a position in front of the class. The children must place their object in the same position. They should justify why they placed the object in that position.

Maths Chat
1. Talk about different objects/items in the class/at home that can be transformed: triangles, squares, rectangles, cubes, cylinders, letters of the alphabet, etc.
2. The children should make a jigsaw puzzle with a partner. They should talk about how they moved the pieces to make them fit.

Maths Eyes
Look at the picture on the IWB showing the puppy in different positions. Click on all the puppies that are in the same position as this one.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations	
Station 1	**Follow the Leader:** Arrange the children in pairs or small groups. Each person in the group needs an identical object, e.g. a pencil, crayon, toy car or teddy. Take turns placing your object in any position on the table or floor. The others in your group must place their object in the exact same position (e.g. standing up tall, lying on its side on his/her chair, facing the same direction). The children take turns being the leader. **Differentiation:** The children could work in pairs if they are finding this tricky.
Station 2	**Making Jigsaws:** Arrange the children in pairs. Ask them to make a selection of jigsaws. As they make the jigsaws, encourage them to talk about the different ways they need to move the jigsaw pieces e.g. 'Turn it this way, turn it over, twist it, flip it, slide it…' **Differentiation:** The jigsaw puzzles should be suited to the ability of the children in the group.
Station 3	**Moving 3-D Shapes:** Arrange the children in groups. Each group needs a selection of 3-D shapes (cubes, cuboids, sphere, cylinders). These could be commercial 3-D shapes or shapes from the environment (e.g. a marble, can of beans, Rubik cube, shoe box, Jenga bricks). Each group also needs a selection of the instruction cards from **PCM 78**. The cards can be placed face down on the table in front of the children. One child chooses a card and reads it out. The children in the group must perform that action on their 3-D shape/object, e.g. The tin of beans is lying flat and the card says 'Stand it up tall'. **Extension:** Each time the children perform the action, they should say whether or not the action changed how the object looks, e.g. 'Put it on its side' will change the appearance of a can of beans, but might not change how a yellow ball looks. **Differentiation:** The children could start with two or three familiar objects before introducing a wider range of 3-D shapes. 
Station 4	**Tower Building:** Arrange the children in groups. Each group needs a large selection of 3-D shapes (cubes, cuboids, spheres and cylinders). The children should work to make different types of a tower using different combinations of the shapes. They have to observe that some shapes are very difficult to use for building, while others work well. That said, a cylinder could be placed at the top of a castle/tower. **Differentiation:** Increase/decrease the number of 3-D shapes available to the children, to help them focus.
Station 5	**Move and Trace:** Give each child needs a copy (on card) of **PCM 79** which has a heart and rectangle, and a sheet of A4 paper. Ask the children to cut out either the heart shape or rectangle. Each child must place their shape on his/her piece of paper and trace around it. Now he/she must move the shape to a different position and trace around it again. The children are encouraged to move the heart in different ways, e.g. slide it, flip it, turn it. When the task is over, the children should have a page of their chosen shape in different orientations. **Differentiation:** The children can work at their own pace within the time allocated. 

February: Week 1	**Chapter 18** (Place Value 2)	**Strand:** Number	**Strand Unit:** Place Value and Base Ten
Core book: Pages 68–72	**Home/School Links book:** Pages 25–26	**Teacher's Resource book:** Pages 56–58	**PCMs:** 51, 80–84

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • understand that 'teen' numbers are made up of 10 plus another number; • use appropriate mathematical language and symbols; • extend, when appropriate, understanding of numbers beyond 10; • recognise numbers to at least 20.
Learning Outcome(s)	Understand that digits have different values depending on their place or position in a number. Use estimation to quickly determine number values and number calculations.
Mathematical Concepts	The value of a digit in a number depends on its place. The position of a digit denotes a value ten times that of the digit to its right. When ten place value units (e.g. ones) are grouped, a new place value unit (e.g. ten) is formed. Zero (0) can be used as a placeholder, allowing us to record a number accurately.

Promoting Maths Talk
Place value, number sentence, ten, teen numbers, match, abacus, notation board.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Place Value 2 can be found on the Chapter 18 Landing Page.

Station Activities 1–6 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting, Ordinal number

Home Support Sheets:
Send **Home Support Sheet 18** home so parents/guardians can help the children with place value.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Stations
Station 1: Ten Frame Teen Numbers; **Station 2:** Notation Board Teen Numbers; **Station 3:** Money Teen Numbers; **Station 4:** The Swapping Game; **Station 5:** Abacus Teen Numbers; **Station 6:** What's My Number?

Digital Resources: Chapter 18 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Place Value 2.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
Notation Boards: Give each child a copy of **PCM 80**. Invite them to display nine units on their notation boards. Ask them to discuss what happens if they add another unit to the notation board. Ask them to come up with a solution and to try to justify it. Elicit from them that they must swap/regroup/exchange the 10 units for one ten. Demonstrate this by inviting one child to be the shopkeeper. Another child goes to the shopkeeper with 10 units (1p coins) and the shopkeeper swaps the ten 1p coins for one 10p coin. Then elicit from the children where they should put the one ten on the notation board. Finally, write 1 under the tens house and 0 under the units house to show the place value of the tens and units. Discuss the value of the 1 and the 0.

Maths Chat
1. Ask a child to make a teen number using two ten frames. Invite the other children to discuss how many more cubes or counters would be needed to make two tens.
2. Using a microwave at home, invite the children to get help from a parent/guardian to heat something for 19 seconds. Ask them to count down from 19 to 0 in time with the microwave.

Maths Eyes
Look at a calendar or thermometer or the licence plates on cars, motorbikes and lorries. Ask the children to point out the teen numbers that they can see.

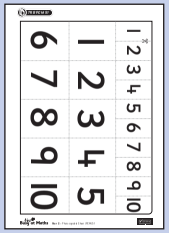
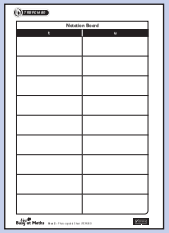
Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Stations

Station 1

Ten Frame Teen Numbers: Arrange the children in pairs. Both pairs will need to use their ten frames. Place the ten frames beside each other horizontally. Children will also need 10 blue/red counters (any colours will suffice). Ask Child A to call out a teen number, e.g. 14. Child A fills their ten frame with 10 blue counters. Child B places four red counters in their ten frame to have 14 = 10 + 4. This can be done with all teen numbers.
Differentiation: Children can write the partition sentences, e.g. 14 = 10 + 4, on their whiteboards.

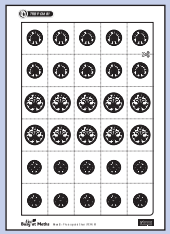
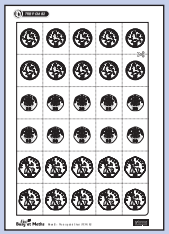
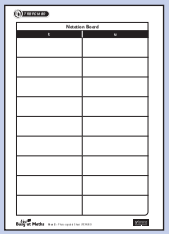
Station 2

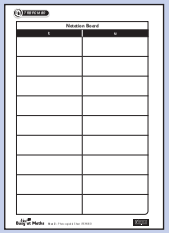
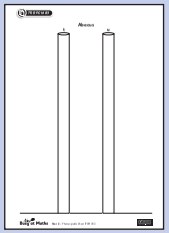
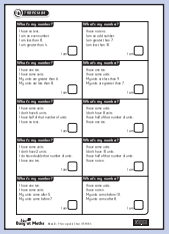
Notation Board Teen Numbers: Give each child/pair/group the teen numeral cards 1–10 from **PCM 51**. They will also need their notation board or the one from **PCM 80**. Ask Child A to place a numeral card, e.g. 7, under the notation board and then Child B places that number of small red counters in the spaces 1–7 on the notation board. Ensure that the children always start at the bottom right under the **u** in the units section. Continue in this way with 8/9 and finally 10, where they have to put a blue counter in the tens section at the bottom left under the **t** in the tens section.
Differentiation: Continue with two-digit cards and Child A can place the digit cards 1 and 4 under the notation board, while Child B has to place 14 counters on it. Continue in this way with 15/16/17/18 and 19.

Station 3

Money Teen Numbers: Give each pair/small group nine real 1p coins and one real 10p coin. If real coins are not available, ask the children to cut out the 1p coins from **PCM 81** and the 10p coins from **PCM 82**. Appoint Child A as the banker. Child A takes a 1p coin and says 'one' as they place it on the notation board (**PCM 80**). Child B takes another 1p coin and says 'two', while they place that coin above the first coin. When a child in the group gets to 10, the banker swaps the ten 1p coins for one 10p coin and says 'one ten'. Child C takes a 1p coin and says 'eleven, which is one ten and one unit'. Child B then takes a 1p coin and says 'twelve, which is one ten and two units'. Have the children continue making teen numbers until they reach 19.
Differentiation: Children can write the partition sentence: 15p = 10p and 5p

Station 4	**The Swapping Game:** Arrange the children in groups of three. Give each child in the group their own notation board or **PCM 80**. They will also need a dice and 19 red counters to represent units and one blue counter to represent a ten. Appoint Child A as the banker, who will hold all the counters. Child B rolls the dice and gets, e.g. 5, and then collects that number of red counters from the banker (Child A). He/she places the five counters in the units section of the notation board, ensuring they start at the bottom. Child C rolls the dice and gets, e.g. 4, and then collects that number of red counters from the banker. He/she then places the four counters in the units section of the notation board. Continue in this way until one child has more than nine red counters. For example: if Child B goes beyond nine counters and has 12, they must say to the banker: 'I want to swap/exchange my 12 counters for one ten (blue counter) and two red counters.' The first child who gets 19 counters and justifies/shows the answer as **1 blue** and **9 red** counters wins the game. **Differentiation:** Children can write the partition sentence: 18 = 10 + 8 or 18 = 1 ten and 8 units. 
Station 5	**Abacus Teen Numbers:** Arrange the children in pairs or small groups. Give each child/pair a copy of **PCM 83**, which is a blank abacus for tens and units. They will also need a dice and 19 red counters to represent units and one blue counter to represent a ten. Appoint Child A as the banker, who will hold all the counters. Child B rolls the dice and gets, e.g. 5, and then collects that number of red counters from the banker (Child A). He/she then places the five counters in the units section of the abacus, ensuring they start at the bottom. Child C rolls the dice and gets, e.g. 4, and then collects that number of red counters from the banker (Child A). He/she places the four counters in the units section of the abacus. Continue in this way until one child has more than nine red counters. For example: if Child B goes beyond nine counters and has 11, they must say to the banker: 'I want to swap/exchange my 11 counters for one ten (blue counter) and one red counter.' The first child who gets 19 counters and justifies/shows the answer as **1 blue** and **9 red** counters wins the game. **Differentiation:** Children can write the partition sentence: 19 = 10 + 9 or 19 = 1 ten and 9 units. 
Station 6	**What's My Number?** Invite Child A to give one clue to the other children as to what the mystery number is using tens and units in the sentence. For example: 'I have 2 tens and 0 units. What number am I?' or 'I have 4 more units than 13. What number am I?' Children then take turns giving clues. **Differentiation:** Ask the more able children to complete **PCM 84**, which has a number of What's My Number questions. 

February: Week 2	**Chapter 19** (Time 2)	**Strand:** Measures	**Strand Unit:** Time
Core book: Pages 73–76	**Home/School Links book:** Pages 27–28	**Teacher's Resource book:** Pages 59–61	**PCMs:** 85–90

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • talk about significant times on the clock; • explore time patterns; • explore numbers relevant to their everyday lives; • use appropriate mathematical language and symbols.
Learning Outcome(s)	Develop a sense of time and its uses.
Mathematical Concepts	Each hour has an area or space on the analogue clock. Events in daily routines can be described and sequenced. Time can be expressed and recorded in a variety of ways.

Promoting Maths Talk
Where can you see the time, the clock, trace, colour, chat, blue, red, long/short hand, o'clock, what time of the day is it, digital clock.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Time 2 can be found on the Chapter 19 Landing Page.

Station Activities 1–5 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Shape and Space: 2-D Shapes
Number: Counting, Numeration

Home Support Sheets
Send **Home Support Sheet 19** home so parents/guardians can help the children with reading the time.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Does it Tell the Time? **Station 2:** Making a Clock; **Station 3:** Roll and Show the Time 1; **Station 4:** Roll and Show the Time 2; **Station 5:** Time Matching.

Digital Resources: Chapter 19 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Time 2.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Term 2: February – Week 2

Chapter 19: Helpful Hints – Time 2

Maths Action – Whole Class Activity
Learn and sing '**The Clock Song**'.

The hands on the clock go round and round,
Round and round, round and round.
The hands on the clock go round and round.
To tell us the time.
The short hand on the clock
Goes from number to number,
Number to number, number to number.
The short hand on the clock
Goes from number to number.
To tell us the time.

Unknown

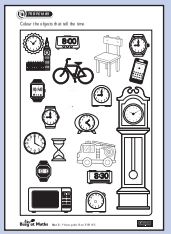
Maths Chat
Talk about how some clocks have hands and some clocks are digital. How many places can you think of where you have seen each type of clock? E.g. classroom wall, kitchen wall, mobile phone, cooker, wristwatch, Fitbit, Big Ben in London.

Maths Eyes
Look at the classroom clock.
When it is 10 o'clock, where is the long hand pointing to? When it is 10 o'clock, where is the short hand pointing to?
Do the same with a number of different hour times.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations

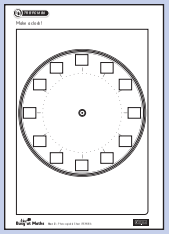
Station 1

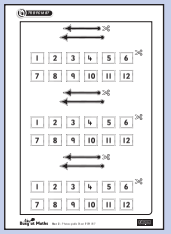
Does it Tell the Time? Give each child in the group a copy of **PCM 85**, which has a number of randomly placed pictures of time pieces on the page. Ask the children to identify the objects that tell the time and to colour them. Ask them to cross out the other objects on the PCM.
Extension: Invite the children to draw pictures of objects that tell the time, which they can see in their classroom. The drawings can be done on the back of PCM 85 or on their whiteboards.
Differentiation: The children can work individually or in pairs.

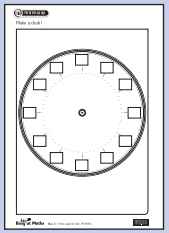
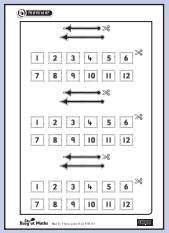
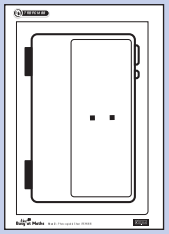
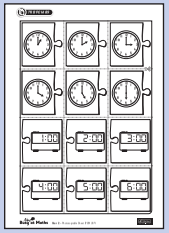
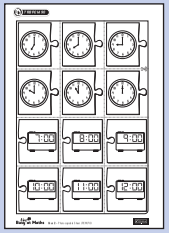


Station 2

Making a Clock: Give each child in the group a copy of **PCM 86**, which is a clockface with spaces for the children to place the numerals 1–12. They will also need **PCM 87** which has the numerals 1–12 and the two clock hands. Invite the children to cut out the numerals 1–12 from PCM 87 and glue them into the correct boxes around the clock on PCM 86. They should then cut out the two hands, which could be glued down, or attached with a paper fastener at the centre circle.
Differentiation: The children can complete the task in pairs or individually.





Station 3	**Roll and Show the Time 1:** Arrange the children in pairs. Give each pair two dice. The children roll the dice and count the total number of dots. They race each other to show that 'o'clock' time on the clock that was made from **PCMs 86** and **87**. **Differentiation:** Some groups/pairs might roll one die and focus on showing times between 1 and 6 o'clock.  
Station 4	**Roll and Show the Time 2:** Again, arrange the children in pairs. Give each pair two dice and a copy of **PCM 88**. The children roll the dice and count the total number of dots. They race each other to show that 'o'clock' time in digital form on PCM 88 or on their whiteboard. **Differentiation:** Some groups/pairs might roll one die and focus on showing times between 1 and 6 o'clock. 
Station 5	**Time Matching:** The children need a copy of the clocks (both analogue and digital) on **PCM 89**. They must cut out the clocks and match the six analogue clock times with the digital clock times that show the same time. They can then cut out the clocks on **PCM 90** and match six analogue clock times with the digital clock times that show the same time. **Differentiation:** Some children might be able to complete the matching exercises on both PCMs at the same time, while others might be limited to three or four matches.  

February: Week 3	**Chapter 20** (Spatial Awareness)	**Strand:** Shape and Space	**Strand Unit:** Spatial Awareness and Location
Core book: Pages 77–80	**Home/School Links book:** Page 29	**Teacher's Resource book:** Pages 62–64	**PCMs:** 91–92

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • understand and use a range of positional words; • follow/give directions from/to a partner for simple movements; • use appropriate mathematical language and symbols; • explore movement using programmable devices.
Learning Outcome(s)	Develop a sense of spatial awareness in relation to their bodies and the immediate environment. Describe the spatial features of objects and their relative position in space.
Mathematical Concepts	Everyday language can be used to describe the relative position and direction of objects and people (to other objects and people). Position can be viewed from various vantage points. Non-standard units can be used to give more accurate directions for movement. Simple maps and/or drawings can be used to track the movement of objects.

Promoting Maths Talk
Near, far away, left, right, on, under, between, beside, above.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Spatial Awareness can be found on the Chapter 20 Landing Page.

Station Activities 1–7 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting, Numeration

Home Support Sheets
Send **Home Support Sheet 20** home so parents/guardians can help the children with spatial awareness.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Where is Teddy? **Station 2:** Put Your Pom Pom…! **Station 3:** Drawing Apples; **Station 4:** Bedroom Map; **Station 5:** Little Red Riding Hood; **Station 6:** Follow the Leader; **Station 7:** Exploring Movement with Technology.

Digital Resources: Chapter 20 Landing Page

Assessment:

1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Spatial Awareness.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
Play the game: 'Simon says… ' in the classroom, the playground, or in the PE hall. Ask the children to line up in rows of 5/6. Each child needs to be at least one metre apart for safety reasons. He/she should also have a cube or counter. Ask the children to stand upright and to remain still. Call out a number of instructions using the spatial awareness language, e.g. *'Simon says… Put your right hand on your head. Hold your right hand near your face. Place the counter on the back of your hand. Place the counter in the palm of your hand. Hold the counter in front of your nose, etc.*
When an instruction is given without using the phrase 'Simon says…' and a child carries out the action, he/she is out of the game and must sit on the side or in some designated area. Play continues until only one child is left.

Maths Chat
Talk about the children in the classroom. The questions below can be used to guide the chat.
Who in the class sits…
1. nearest to the sink?
2. furthest from the sink?
3. nearest to the teacher's desk?
4. furthest from the teacher's desk?
5. nearest to the door?
6. furthest from the library shelf?
7. nearest to the window?
8. furthest from the recycling bin?

Maths Eyes
Ask the children:
1. What objects are to the left of the whiteboard?
2. What objects are to the right of the whiteboard?
3. What is beside the main door?
4. What is above the whiteboard?
5. Who is between (name of child) and (name of child)?
6. What is behind the waste bin?
7. What is on the window sill?
8. Where is the toilet?

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations

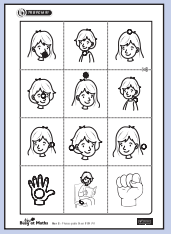
Station 1

Where is Teddy? Each group needs a teddy (or doll/toy car). The children must take turns placing the teddy in a position that can be easily seen by all members of the group, e.g. on a chair, under a table, near the bin, beside Lauren. The children must describe where Teddy is using key words in their answer.
Extension: Encourage the children to come up with different ways of describing Teddy's position, e.g. 'Teddy is near the teacher's desk and Teddy is between the desk and the whiteboard.'
Differentiation: Begin with simple positions such as on, under and beside before introducing more complex positions.



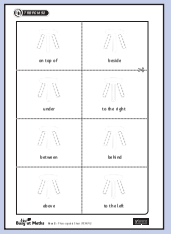
Station 2

Put Your Pom Pom…! Each child in the group needs a pom pom (or cube/counter). Give each group a copy of **PCM 91**. Ask them to cut out the picture cards. The cards should be placed upside down in the centre of the table. The children take turns picking up a card (without showing the group). From looking at the card, the child must explain where the other children must place their pom pom, e.g. 'Put your pom pom behind your ear!'
Extension: Encourage the children to make up their own instructions, using positional words.
Differentiation: Use a smaller selection of cards for children who need additional support.



Station 3

Drawing Apples: Give each group a copy of **PCM 92**. Ask them to cut out the picture cards and place them face down on the table. They take turns picking up a card. Together, they must call out the instruction and draw an apple in the correct position (on the stool).
Extension: Encourage the children to give instructions to a partner/the group which can be completed on their whiteboard, e.g. 'Draw an apple under a tree'.
Differentiation: It will be a good idea to use mixed ability literacy groups. Strong readers will be able to assist readers to complete the task who may need some assistance. The cards can be laminated so that the task can be completed as many times as possible (with whiteboard markers).



Station 4	**Bedroom Map:** Each group needs a selection of materials, e.g. Lego bricks, string, pom poms, interlocking cubes, playdough, pipe cleaners, headless matches, lollipop sticks. The children must use the materials to create a simple model/map of their own bedroom at home. **Differentiation:** Some children may find it difficult to visualise their own bedroom. They can use the picture on page 78 of the Core book to base their map on.
Station 5	**Little Red Riding Hood:** Invite the children to draw their own map which Little Red Riding Hood (the children can use the map on page 80 of the Core book as a guide) will follow from her own house to Granny's house. **Differentiation:** The maps can be as simple/detailed as the children are able to make them.
Station 6	**Follow the Leader:** The children work in pairs with one child as the 'leader' and the other as the 'follower.' The leader gives clear instructions using simple positional and directional language such as 'move forward two steps,' 'turn left,' or 'step back,' while the partner listens carefully and follows the instructions to reach a target spot. Children then swap roles to practise both giving and receiving directions. **Differentiation:** The direction instructions can be as simple/detailed as the children are able to make them.
Station 7	**Exploring Movement with Technology:** Give each group a programmable device, e.g. a Bee-Bot (alternative programmable devices may also be used, depending on the resources available within your school) and encourage them to explore how it moves using simple commands. Ask the children to programme the device to move forwards, backwards, left and right to follow a route or reach a target. Encourage them to describe the device's movements using simple positional and directional language. **Differentiation:** Programme the device to navigate a more complex route with additional turns and obstacles.

March: Week 1	**Chapter 21** (More Than/Less Than)	**Strand:** Number	**Strand Unit:** Numeration and Counting
Core book: Pages 81–84	**Home/School Links book:** Pages 30–31	**Teacher's Resource book:** Pages 65–67	**PCMs:** 93–95

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • develop an understanding of one-to-one correspondence and come to appreciate that the size of a set is given by the last number in the count; • compare sets by matching objects/counting objects to understand the terms 'more than', 'less than', 'the same'; • extend, when appropriate, counting in ones and recognition of numbers beyond 10; • understand the conservation of number; • use appropriate mathematical language and symbols.
Learning Outcome(s)	Develop an awareness that the purpose of counting is to quantify. Use a range of counting strategies for a range of purposes.
Mathematical Concepts	Use a range of counting strategies for a range of purposes. Quantities can be subitised and compared. The last number in the count indicates the quantity in a set. There are a range of counting strategies, including grouping objects and arranging objects in various visual configurations.

Promoting Maths Talk More/less than, write, colour, totals, the same, amount.	**Emphasising Mathematical Modelling/ Encouraging Playfulness** Digital activities for More Than/ Less Than can be found on the Chapter 21 Landing Page. Station Activities 1–7 can be completed in small groups on a day of teacher's choice. Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*	**Differentiation** Differentiated exercises are included in the Maths Action Stations.	**Linkage** **Number:** Counting, Numeration **Data and Chance:** Colours **Home Support Sheets** Send **Home Support Sheet 21** home so parents/guardians can help the children with solving problems involving more/less than up to 20.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Apple Rows! **Station 2:** Pear Towers/Columns; **Station 3:** Oranges and Bananas; **Station 4:** Colouring the Sets That Have More Items; **Station 5:** Colouring the Sets That Have Less/Fewer Items; **Station 6:** Comparing Linked Chains; **Station 7:** Comparing Towers.

Digital Resources: Chapter 21 Landing Page

Assessment:	**1.** Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress. **2.** Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation). **3.** Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: More Than/Less Than. **4.** Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Term 2: March – Week 1

Chapter 21: Helpful Hints – More Than/Less Than

Maths Action – Whole Class Activity
Invite two children to the front of the class. Ask each child to choose a number (up to 20) and collect that number of cubes. They should place their cubes in a line so they can be easily compared.
Encourage the rest of the class to ask and answer questions about the two groups, such as:
1. How many cubes are in each group?
2. Which group has more or fewer cubes?
3. How many more cubes are needed to make 20?
4. What is the difference between the two groups?
You can then invite a few more children to come up and change the groups by adding or removing cubes. The class can observe and describe what happens, using language such as "one more," "one less," "more than," and "fewer than."

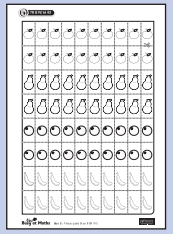
Maths Chat
Ask the children to talk about the different items in your class that have more or less/fewer items, e.g. windows, toilets, whiteboards, radiators, doors, groups, schoolbags, pencil cases, lunch boxes/bottles.

Maths Eyes
Go on a More or Less Hunt around the classroom. Can children spot groups of objects that have more or less? For example, more windows than doors or less tables than chairs.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations

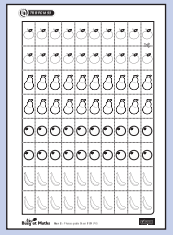
Station 1

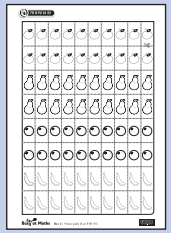
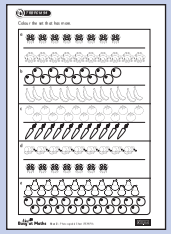
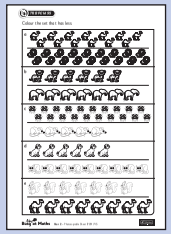
Apple Rows! Children work in pairs. Give each child a copy of **PCM 93**. Ask Child A to choose a number of apples up to 20 and colour them green. Then ask Child B to choose a number of apples up to 20 and colour them red. For example, Child A could choose 9 green apples and Child B could choose 6 red apples. Both children then cut out their apples. Ask Child A to arrange the green apples in a horizontal row. Child B then puts their red apples under the green apples in one-to-one correspondence. The children must discuss which row has more/less apples. Encourage children to use different numbers.
Differentiation: Focus on fewer items (e.g. up to 10/15) for the children who may find the activity challenging.



Station 2

Pear Towers/Columns: Children work in pairs. Give each child a copy of **PCM 93**. Ask Child A to choose a number of pears up to 20 and colour them green. Then ask Child B to choose a number of pears up to 20 and colour them red. For example, Child A could choose 18 green pears and Child B could choose 15 red pears. Both children then cut out their pears. Ask Child A to arrange the green pears in a vertical tower (column). Child B then puts their red pears to the side of the green pears in one-to-one correspondence. The children can compose a variety of questions about the columns of red/green pears, e.g.
1. Which column has most or least/fewest?
2. How many more red/green pears are there?
3. How many more red/green pears do we need to make both columns the same?
Differentiation: Focus on fewer items (e.g. up to 10/15) for the children who may find the activity challenging.



Station 3	**Oranges and Bananas:** Give each child/ group a copy of **PCM 93**. Ask Child/Group A to cut out the oranges and Child/Group B to cut out the bananas. Ask the Child/Group A to choose a number up to 20 and to place the oranges randomly on the table or on an A4 sheet. Ask Child/Group B to do the same with the bananas. Now ask the children to say/colour which set has more or fewer/less items. They should arrange the fruits in horizontal rows or vertical columns to check their answers. **Differentiation:** Focus on fewer items (e.g. up to 10/15) for the children who may find the activity challenging. 
Station 4	**Colouring the Sets That Have More Items:** Give the children a copy of **PCM 94**. They must colour the set that has more. **Differentiation:** The children who may find the activity challenging should be able to complete at least half of the sets. 
Station 5	**Colouring the Sets That Have Less/Fewer Items:** Give the children a copy of **PCM 95**. They must colour the set that has less/fewer. **Differentiation:** The children who may find the activity challenging should be able to complete at least half of the sets. 
Station 6	**Comparing Linked Chains:** In pairs, ask the children to build a blue chain and a red chain (the colours don't matter so long as each is different). Give each child up to 20 links each, ensuring differing amounts. They must line up the chains in one-to-one correspondence, either vertically (upwards) or horizontally (lengthways). They can then identify which chain has more or less/fewer links, e.g. **1.** There are more blue links. There are fewer red links. **2.** There are two more blue links than red links. There are two fewer red links than blue links. **Differentiation:** Ask the children to compare amounts of links using three colours. 
Station 7	**Comparing Towers:** Arrange the children in pairs or small groups. Have up to 20 red and up to 20 green interlocking cubes or Lego bricks. Ask one child to make a red tower by choosing a number up to 20, and another child to make a green tower by choosing a different number up to 20. Ask them to place the towers either vertically or horizontally and compare, e.g. **1.** There are 5 more red cubes than green cubes. **2.** There are 5 less/fewer green cubes than red cubes. **Differentiation:** Play the game as many times as they can in the time allotted. You can increase/decrease the length of the timer.

March: Week 2	**Chapter 22** (Length 2)	**Strand:** Measures	**Strand Unit:** Measuring – Length
Core book: Pages 85–88	**Home/School Links book:** Page 32	**Teacher's Resource book:** Pages 68–69	**PCMs:** 96

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • compare two objects of different length; understand and use the language of comparison; • order three objects of different length, weight, capacity, area; talk about the ordering using appropriate language; • use appropriate mathematical language and symbols; • begin to measure using non-standard units.
Learning Outcome(s)	Demonstrate an awareness that attributes such as length, weight, capacity and area can be measured and compared.
Mathematical Concepts	Objects have attributes that can be measured such as length, weight, capacity and area. We can compare and order things by how much of a particular attribute (physical quantity) they have relative to each other. Attributes are compared and ordered using units of measurement.

Promoting Maths Talk
Measuring, how many, estimate (guess), length, height, width, hands, long, wide, tall, tallest, shortest, widest, narrowest.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Length 2 can be found on the Chapter 22 Landing Page.

Station Activities 1–5 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.
Give the early finishers copies of **PCM 96** which has supplementary work on measuring using non-standard units.

Linkage
Number: Counting
Shape and Space: 2-D Shapes, 3-D Shapes

Home Support Sheets
Send **Home Support Sheet 22** home so parents/guardians can help the children with the concept of length.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Handprint Measuring; **Station 2:** Measuring Standing Jumps; **Station 3:** Pencil Measuring; **Station 4:** Paperclip Measuring; **Station 5:** Marker Measuring.

Digital Resources: Chapter 22 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Length 2.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
Stick an A4 page on the whiteboard using Blu Tack or Sellotape.
1. Ask the children to estimate/guess how many markers wide the sheet is.
2. Ask them how many markers long the sheet is.
3. Do the same exercise using a range of items – paperclips, clothes pegs, pencils, cubes. Ask if they got the same result each time.
4. Ask them to justify which object they thought was best to measure the width and length of the paper.

Maths Chat
Ask the children to talk about what they would use to measure the length, height and width of different objects found in their group/class or at home – school bag, lunchbox, water bottle, table, chair, book, glove.

Maths Eyes
Each child in the group places his/her pencil or marker on the table. They should line them up side by side in order to see which is longest/shortest.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations	
Station 1	**Handprint Measuring:** Give each child an A4 sheet of paper. Ask them to trace around their hand with their fingers spread open and cut it out. They use this to measure objects in the class. Ask them to measure the length/width of the table using the handprint. This can be done using one handprint a number of times or the children can group their handprints. They should estimate their answers before they actually measure. **Differentiation:** The children can write down their estimates and then write the result on a piece of paper or whiteboard.
Station 2	**Measuring Standing Jumps:** The following can be done in the classroom, school hall or in the PE hall. Draw a line on the ground/floor with chalk or use a stick/ruler as a line. Each child in the group does a standing jump (no run up). Each child marks where he/she landed. They then use the handprint from Station 1 to measure the length of the jump. **Differentiation:** They can write the result on their whiteboard: 'My jump was _____ handprints long.'
Station 3	**Pencil Measuring:** Ask each child to take out a pencil. Ask her/him to measure the length/width of the table using the pencil. This can be done using one pencil a number of times or the children can group their pencils. They should estimate their answers before they actually measure. Ask the children if they got the same answer when they used only one pencil or when they grouped their pencils. Ask them to justify their answers – all pencils were the same length/some were shorter, etc. **Differentiation:** The children can write the result on their whiteboard: 'Our table was _____ pencils long/wide/high.'
Station 4	**Paperclip Measuring:** Give each pair/group some paperclips. Ask the children to measure the length/width of their maths book using the paperclips. They should estimate their answers before they actually measure. **Variation:** They can do the same with different exercise books. They can ask questions of each other, e.g. 'How many paperclips longer/shorter was my maths book than my English book?' **Differentiation:** The children can write the result on their whiteboard: 'My book was _____ paperclips long/wide.'
Station 5	**Marker Measuring:** Give the children some markers (they may have their own) and ask them to measure the height of each individual in their group using the markers. They should estimate their answers before they actually measure. They should write the result on their whiteboard: 'I was _____ markers tall.' **Differentiation:** Ask them to do the same activity using long pencils of the same length. Ask them which measuring implement (pencil or marker) was better for measuring. They should justify their answers with valid reasons.

March: Week 3	**Chapter 23** (Numbers to 50)	**Strand:** Number	**Strand Unit:** Place Value and Base Ten
Core book: Pages 89–93	**Home/School Links book:** Pages 33–34	**Teacher's Resource book:** Pages 70–72	**PCMs:** 15, 51, 80–83, 97–98

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • understand that 'teen' numbers are made up of 10 plus another number; • extend, when appropriate, understanding of numbers beyond 10; • recognise numbers to at least 20; • count forwards and backwards from different starting points; • use appropriate mathematical language and symbols.
Learning Outcome(s)	Understand that digits have different values depending on their place or position in a number.
Mathematical Concepts	The value of a digit in a number depends on its place. The position of a digit denotes a value ten times that of the digit to its right. When ten place value units (e.g. ones) are grouped, a new place value unit (e.g. ten) is formed. Zero (0) can be used as a placeholder, allowing us to record a number accurately.

Promoting Maths Talk
Numbers, puzzle, units, set, colour, join, circle, complete, write, trace, fill, add, red, green, blue, yellow, orange, start, key code, tens, units, twenty, thirty, forty, notation board, abacus.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Numbers to 50 can be found on the Chapter 23 Landing Page.

Station Activities 1–8 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations. The early finishers can complete the questions on **PCM 98** which has supplementary work on place value to 50.

Linkage
Algebra: Pattern
Number: Combining and partitioning; Colours

Home Support Sheets:
Send **Home Support Sheet 23** home so parents/guardians can help the children with place value to 50.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Stations
Station 1: Cube Numbers; **Station 2:** Ten Frame Numbers; **Station 3:** Notation Board Numbers; **Station 4:** Abacus Numbers; **Station 5:** Money Numbers; **Station 6:** The Swapping Game; **Station 7:** Ten More or Less; **Station 8:** What's My Number?

Digital Resources: Chapter 23 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Numbers to 50.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
Clap, Tap: Play the game Clap, Tap with the children. Ask them all to count in tens (decuples) from 10 to 50. As they say each decuple, they should alternate between clapping and tapping a number, e.g. clap for 10, tap for 20, clap for 30, tap for 40, etc. After a few turns, ask the children to count backwards starting at 50/40/30, etc.

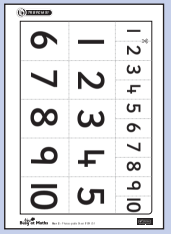
Maths Chat
Ask the children to chat about how many hands would be needed to have 10 fingers/20 fingers/30 fingers, etc.

Maths Eyes
Ask the children to look at 1p, 2p, 5p, 10p, 20p coins and discuss their value. If 1p is 1 unit, how many units in 2p/5p/10p/20p? If 10p is 1 ten, how many tens are in 20p/30p/40p?

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Stations

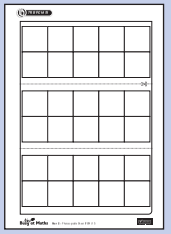
Station 1

Cube Numbers: Arrange the children in pairs or small groups. Give them interlocking cubes or multi-links of two colours, if possible. Ask each pair/group to use the numerals from **PCM 51** to make any numeral from 21 to 29. Invite Child A to place a numeral card, e.g. 28, on the table. Invite the other children in the group to race to make that number using cubes: two red cubes to denote the tens and eight green cubes to denote the units.
Differentiation: Do this activity with any or all of the numbers depending on ability and time allowed.



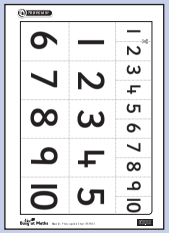
Station 2

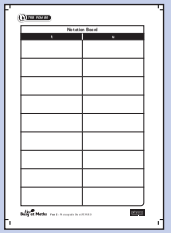
Ten Frame Numbers: Arrange the children in pairs or small groups with each child using their ten frames. Use two copies of **PCM 15** as the children will need up to five ten frames. Place the ten frame beside each other horizontally. Children will also need up to 50 counters of two different colours (any colours will suffice). Child A calls out a number from 20 to 50, e.g. 36, and fills their three ten frames with 10 red counters on each. Child B places 6 green counters in their ten frame to have 36 = 30 + 6. This can be done with any number from 20 to 50.
Differentiation: Children can write the partition sentences, e.g. 36 = 30 + 6, in their exercise books.

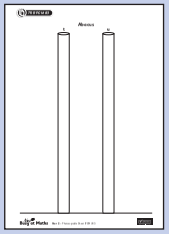
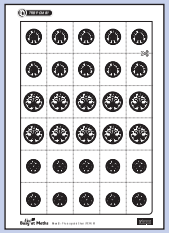
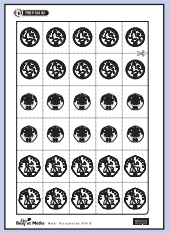
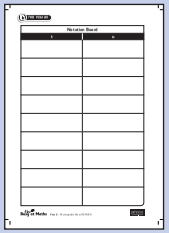
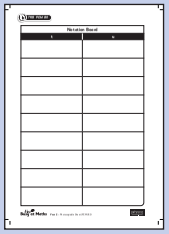
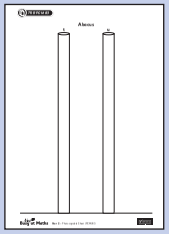
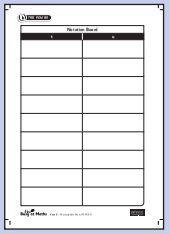
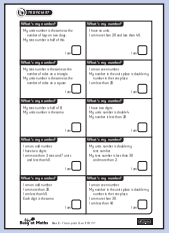


Station 3

Notation Board Numbers: Give each child/pair/group the numeral cards 1–10 from **PCM 51**. They will also need their own notation board or the one from **PCM 80**. Child A places a numeral card, e.g. 48, under the notation board and Child B places that number of small red counters in the spaces 1–8 on the notation board. Ensure that the children always start at the bottom right under the **u** in the units section. Child B will place four blue counters in the tens section starting at the bottom left under the **t** in the tens section. Arrange the children individually if that works better.
Differentiation: Continue with two digit cards and ask Child A to place the digit cards 3 and 9 under the notation board. Child B has to place the number 39 on it using the correct coloured counters. Continue in this way with 25, 36, 38, 44, etc.





Station 4	**Abacus Numbers:** Arrange the children in groups of three. Give each group a blank tens and units abacus **PCM 83**, a die, red counters for units and blue counters for tens. Choose one child to be the banker who keeps all the counters. The other children take turns rolling the die. After rolling, they collect the matching number of red counters from the banker and place them in the units section of their abacus, starting from the bottom. As the game progresses, whenever a player has more than nine red counters, they exchange ten red counters for one blue counter, demonstrating an understanding of place value. For example, if a player has 12 red counters, they must say to the banker: 'I want to swap/exchange my 12 counters for one ten (blue counter) and two red counters.' Play continues until a player reaches 50, shown on the abacus as 5 blue counters and 0 red counters. To win, the player must also explain that the 5 blue counters represent 5 tens, or 50. **Differentiation:** Children can represent their winning total by writing 50 = 5 tens and 0 units and explaining how the 5 blue counters represent 5 groups of ten. 
Station 5	**Money Numbers:** Give each pair or group nine real 1p coins and five real 10p coins. If no real coins are available, ask the children to cut out the 1p coins from **PCM 81** and the 10p coins from **PCM 82**. They will also need a copy of **PCM 80** (notation board). Appoint Child A as the teacher/leader/banker. Child A calls out a money number, e.g. 36p, and the other children in the group race to make 36p in two piles of three 10p coins and six 1p coins. They could also place the 10p coins under each other and the 1p coins under each other. They then place the number 36 on the notation board on PCM 80. **Differentiation:** Invite the children to place the coins on their notation boards and write the partition sentence: 36p = 30p + 6p or 36 = 3 tens and 6 units.   
Station 6	**The Swapping Game:** Arrange the children in groups of three. Give each child a notation board **PCM 80**, a die, red counters for units, and blue counters for tens. Choose one child to be the banker who keeps all the counters. The other children take turns rolling the die. After rolling, they collect the matching number of red counters from the banker and place them in the units section of their notation board, starting from the bottom. As the game progresses, whenever a player has more than nine red counters, they exchange ten red counters for one blue counter, demonstrating an understanding of place value. For example, if a player has 14 red counters, they must say to the banker: 'I want to swap/exchange my 14 counters for one ten (blue counter) and two red counters.' Play continues until a player reaches 50, shown on the abacus as 5 blue counters and 0 red counters. To win, the player must also explain that the 5 blue counters represent 5 tens, or 50. **Differentiation:** Children can represent their winning total by writing 50 = 5 tens and 0 units and explaining how the 5 blue counters represent 5 groups of ten. 
Station 7	**Ten More or Less:** Arrange the children in pairs. Give each pair the abacus from **PCM 83** or the notation board from **PCM 80** as well as cubes, counters, buttons, etc. Invite Child A to make a number on the abacus, e.g. 26. Child B must make the number that is 10 more or 10 less than that number on either the abacus or notation board. Be mindful to select starting numbers that do not exceed 50 when ten more is added. **Differentiation:** Ask the more able children to write down the original number and place the number that is 10 more beside it.  
Station 8	**What's My Number?** Invite Child A to give one clue to the other children as to what the mystery number is, using tens and units in the sentences. For example: 'I have 4 more units than 13. What number am I?' Children then take turns giving clues. **Differentiation:** Ask the more able children to complete **PCM 97**, which has a number of What's My Number questions. 

March: Week 4	**Chapter 24** (Capacity)	**Strand:** Measures	**Strand Unit:** Measuring – Capacity
Core book: Pages 94–96	**Home/School Links book:** Page 35	**Teacher's Resource book:** Pages 73–75	**PCMs:** 99–101

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • compare two objects of different length/weight/capacity/area; understand and use the language of comparison; • order three objects of different length, weight, capacity, area; talk about the ordering using appropriate language; • find an object of similar length, weight, capacity, area; talk about their findings in terms of 'just about the same' length, weight, capacity, area; • use appropriate mathematical language and symbols; • choose and use, with guidance, non-standard units to measure length, capacity, weight; talk about their work.
Learning Outcome(s)	Demonstrate an awareness that attributes such as length, weight, capacity and area can be measured and compared.
Mathematical Concepts	Objects have attributes that can be measured such as length, weight, capacity and area. We can compare and order things by how much of a particular attribute (physical quantity) they have relative to each other.

Promoting Maths Talk
Capacity, full, half full, nearly empty, empty, match, colour, order.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Capacity can be found on the Chapter 24 Landing Page.

Station Activities 1–7 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting, Numeration, Ordinal Number

Home Support Sheets
Send **Home Support Sheet 24** home so parents/guardians can help the children with capacity.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: The Right Word 1; **Station 2:** The Right Word 2; **Station 3:** Ordering the Items 1 to 4 from Lowest to Highest Capacity; **Station 4:** Lunchbox vs Bottle; **Station 5:** Which Bottle Holds More? (Similar Shapes); **Station 6:** Which Bottle Holds More? (Different Shapes); **Station 7:** Which Box Holds More?

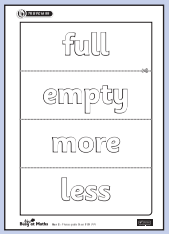
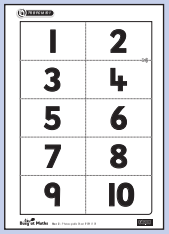
Digital Resources: Chapter 24 Landing Page

Assessment:	**1.** Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress. **2.** Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation). **3.** Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Capacity. **4.** Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Term 2: March – Week 4

Chapter 24: Helpful Hints – Capacity

Maths Action – Whole Class Activity	**Maths Chat**	**Maths Eyes**
Place three similar containers on the teacher's desk – glass tumblers would be best. Have one glass full, another half full and the other empty. Ask the children to point to the half full glass, etc. You can increase the level of difficulty by having a fourth glass nearly full. The children can order the glasses 1–4 in order of capacity from greatest to least capacity.	Talk about where you might see different types of containers for holding liquids – glass, bottle, jug, spoon, cup, mug, flower pot, pot, pan, swimming pool, bucket, plunge pool, carton, perfume or soap bottle, etc.	Look around the classroom to see how many containers that hold liquid are visible.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations		
Station 1	**The Right Word 1:** Give each member of the group a copy of **PCM 99**, which has the capacity words: full, empty, more, less. Ask the children to colour the four words. Place four cups, glasses or plastic bottles of water, rice or spaghetti pieces on the table. Ask the children to place the correct word under each container. **Differentiation:** The children can compose their own questions about the different containers, e.g. 'Which container holds more, most, less or least?'	
Station 2	**The Right Word 2:** Give each member of the group a copy of **PCM 100**, which has the capacity words: nearly full, nearly empty, holds more, holds less. Ask the children to colour the four words. Place four cups, glasses or plastic bottles of water, rice or spaghetti pieces on the table. Ask the children to place the correct word under each container. **Differentiation:** The children can compose their own questions about the different containers, e.g. 'Which container holds more, most, less or least?'	
Station 3	**Ordering the Items 1 to 4 from Lowest to Highest Capacity:** Give each group a packet of rice, spaghetti pieces, cubes, etc., and four different containers, e.g. eggcup, lunchbox, pencil case and cup. Ask the children to order the containers 1–4 from lowest to highest capacity. They can place the numerals 1–4 from **PCM 101** under the correct container. **Differentiation:** Use five or more containers instead of four.	
Station 4	**Lunchbox vs Bottle:** Give each group a packet of rice, spaghetti pieces, cubes, etc., and their lunchbox and drinks bottle. Ask the children to estimate which item holds more or less. They can use the rice, spaghetti pieces or cubes to justify their results. **Differentiation:** Add a third container such as a bowl, cup, mug or glass to go with the lunchbox and water bottle.	

Station 5	**Which Bottle Holds More? (Similar Shapes):** Give each group up to five bottles of similar shape and ask them to arrange them in order of which has the most or least water in them. Have one full, one nearly full, one half full, one nearly empty and the last one empty. Ask the children to tell you why they think the bottles were arranged in that order. **Differentiation:** Ask questions such as: Why did you put that bottle first? Why do you think it holds more than that bottle? Why do you think that bottle holds less than this one?
Station 6	**Which Bottle Holds More? (Different Shapes):** Give each group some clean, empty bottles that are to hand. The bottles should obviously be of different shapes, but relatively similar in capacity. This is quite an important experiment as many children wrongly think that the shape of a container determines the actual capacity, i.e. that a tall bottle holds more than a short one. Ask the children to arrange them in order from 1 to 5 of which holds most/least. Ask them to tell you why they think the bottles were arranged in that order. After the discussion, have the children test whether their estimations of the capacity of the different bottles was correct by filling each one with water. Measure the amount of water that was in each using a measuring jug. If there is no measuring jug to hand, pour the water from the individual bottles into a larger bottle and use a marker to show the amounts that were in each of them. **Differentiation:** Increase/decrease the number of bottles depending on group ability.
Station 7	**Which Box Holds More?** Give the each group some clean, empty boxes, e.g. a shoe box, tissue box, toy box, teabag box, hat box, chocolate box, tablet box. Ask them to arrange the boxes in order of which holds most/least. Ask them to explain why they arranged them in that order. **Differentiation:** Increase/decrease the number of boxes depending on group ability.

April: Week 1	**Chapter 25** (Subtraction 1)	**Strand:** Number	**Strand Unit:** Sets and Operations
Core book: Pages 97–101	**Home/School Links book:** Pages 36–37	**Teacher's Resource book:** Pages 76–78	**PCMs:** 102–105

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • compare sets by matching objects/counting objects to understand the terms 'more than', 'less than', 'the same'; • investigate the relationship between addition and subtraction in practical situations; • count forwards and backwards from different starting points; • use appropriate mathematical language and symbols; • be involved in solving practical problems.
Learning Outcome(s)	Select, make use of and represent a range of addition and subtraction strategies.
Mathematical Concepts	A number fact is a mental picture of the relationship between a number and the parts that combine to make it. Representations of subtraction can include reduction, complement and difference. Numbers and symbols are used to construct and express number sentences. Real-life situations can be expressed using word and number sentences. Numbers and symbols can help to solve problems or are used to express contexts mathematically.

Promoting Maths Talk
Subtract, subtraction, equal/equals, number strip, look, circle, write, colour, draw, count on, read, estimate, reduction, complementary addition, circles, triangles, cubes, how many, take away, minus, scales, weight.

Emphasising Mathematical Modelling/Encouraging Playfulness
Digital activities for Subtraction 1 can be found on the Chapter 25 Landing Page.

Station Activities 1–6 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations. The early finishers can be given a copy of **PCM 105** to complete.

Linkage
Number: Counting, complementary addition, numeration

Home Support Sheets:
Send **Home Support Sheet 25** home so parents/guardians can help the children with subtraction within 10.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Stations
Station 1: Equal Towers; **Station 2:** Ten-in-a-Bag; **Station 3:** Down the Stairs from 10; **Station 4:** Four-in-a-Row; **Station 5:** Playing Card Subtraction; **Station 6:** Jigsaw Subtraction.

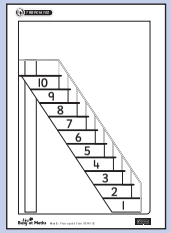
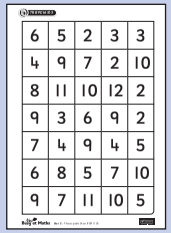
Digital Resources: Chapter 25 Landing Page

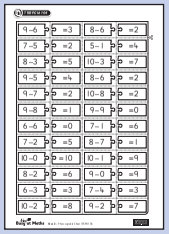
Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Subtraction 1.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
Countdown to Zero: Arrange the children in pairs, as a whole class or in table groups. Call out a number, e.g. 9, and then call a smaller number, e.g. 4. The children have to reach the target of 4 by making a subtraction, e.g. 9 to 4: 9 – 4 = 5.

Maths Chat
Talk about how you can add a number to your answer to check that you are correct after completing a subtraction question, e.g. 9 – 4 = 5 means that 4 + 5 = 9.

Maths Eyes
Arrange the children in pairs. Child A looks around the classroom and finds two numbers in the environment (between 1 and 10) and asks Child B to subtract the smaller number from the larger number. Child B gives the answer and then the children swap roles and Child B has to find two numbers.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Stations	
Station 1	**Equal Towers:** Arrange the children in pairs or small groups. Give them Dienes blocks/cubes/Lego bricks, etc. to work with. Invite them to take turns to build a tower of up to 10 blocks each using two different colours. Child A must build a tower and Child B must build a tower of equal size, e.g. Child A builds a tower of 8, with 4 blue and 4 red. Child B could build a tower with 5 yellow and 3 red, while Child C could build the tower with 2 blue and 6 pink, etc. Continue in this way, with children taking turns to build their towers and the others then making equal towers using different amounts and colours. **Differentiation:** Allow some children to concentrate on building towers with no more than five or six blocks.
Station 2	**Ten-in-a-Bag:** Arrange the children in pairs or small groups. Give each pair or group a bag, box or container and ask them to count 10 items into it. The items can be anything small, such as counters, crayons, blocks, etc. Invite Child A to then remove a small handful of items and count them out. The next player in turn gets to estimate (guess) how many are left in the bag. A point is awarded for each correct answer. A bonus point is awarded for saying the correct word sentence for that play. **Differentiation:** Use more or less than 10 items in the bag.
Station 3	**Down the Stairs from 10:** Arrange the children individually or in small groups. Give each player a copy of **PCM 102**, which is a flight of stairs with the numbers descending from 10 to 1 to reach the bottom. Give each child or group one dice and invite the players to take turns at throwing the dice. They must count back the result of the throw from 10 and call out the number sentence, i.e. 10 – 4 = 6. Players take turns to come down the stairs, but must throw an exact number to finish the game. **Differentiation:** Ask the children to write the number sentence on their whiteboards, e.g. 10 – 4 = 6. 
Station 4	**Four-in-a-Row:** Arrange the children in small groups. Give each member of the group a copy of **PCM 103**, which is a Bingo grid with numbers 1–12. The game requires two dice to be thrown at one time. To start the game, invite the children to throw one dice. The first child who throws a 6 starts the game. When he/she throws the two dice, they must add the totals, e.g. 3 + 6 = 9. Place the numeral cards 1–10 in a pile in the centre of the table – a few copies of each numeral card. The player must select a numeral card, e.g. 3, and subtract that number from the total on the two dice e.g. 9 – 3 = 6. If the number to be subtracted is too big, they take another turn. If they get the subtraction question correct, e.g. 9 – 3 = 6, they colour the number 6 on PCM 103. The first child to colour four numbers in a row wins the game. Note that the numbers on the dice may go to 12, but that is not a problem for most children! **Differentiation:** Children can use a number line to support them when subtracting. 

Station 5	**Playing Card Subtraction:** Arrange the children in pairs or small groups. Ask them to place the cards 1–10 from one suit of an ordinary pack of playing cards face down in the centre of the table. Child A picks two cards and looks carefully at them. They then must take the smaller number from the bigger one, e.g. 8 of hearts – 3 of hearts = 5. If they get the subtraction correct, they get a counter. The child with the most counters after a designated number of rounds wins the game. **Differentiation:** Have the children write each subtraction sentence on their whiteboards.
Station 6	**Jigsaw Subtraction:** Arrange the children in pairs or small groups. Give each pair or group a copy of **PCM 104**, which has two sets of subtraction questions and two sets of subtraction answers. Ask the children to cut out the individual subtraction questions and answers. Place all the question cards in a pile in the centre of the table, and place all the answers face up on the table. Invite Child A to pick a question card and read it. They then look at the answer cards and place the correct answer beside the question (as a number sentence). If the correct answer is given, the child wins a counter. The children then take turns. After an agreed number of rounds, the child with the most counters wins the game. **Differentiation:** Increase or decrease the number of questions and answers in the centre of the table. Some children may do only one section of the subtraction questions, while others will complete PCM 104 entirely. 

April: Week 2	**Chapter 26** (Pattern 2)	**Strand:** Algebra	**Strand Unit:** Patterns, Rules and Relationships
Core book: Pages 102–104	**Home/School Links book:** Pages 38–39	**Teacher's Resource book:** Pages 79–81	**PCMs:** 106–111

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • extend activities to include counting in 2s, 5s and 10s; • explore pattern in number; • count forwards and backwards from different starting points; • use appropriate mathematical language and symbols.
Learning Outcome(s)	Identify and express relationships in patterns, including growing or shrinking shape patterns and number sequences.
Mathematical Concepts	We can describe the structure of a growing or shrinking pattern in word or number sentences, and use our description to predict future terms. Quantitative change in growing and shrinking patterns is consistent and predictable.

Promoting Maths Talk
Pattern, count, count in 2s, count in 5s, count in 10s, total, find, number, write, missing numbers, each, skip count, forwards, next, backwards, finish.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Pattern 2 can be found on the Chapter 26 Landing Page.

Station Activities 1–8 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting, numeration
Shape and Space: Shape patterns

Home Support Sheets:
Send **Home Support Sheet 26** home so parents/guardians can help the children with pattern.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Stations
Station 1: Complete Each Pattern in 2s; **Station 2:** Complete Each Pattern in 5s; **Station 3:** Complete Each Pattern in 10s; **Station 4:** Pegboard Patterns; **Station 5:** Counting in Twos; **Station 6:** Counting in Fives; **Station 7:** Counting in Tens; **Station 8:** Shape Patterns.

Digital Resources: Chapter 26 Landing Page

Assessment:	**1.** Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress. **2.** Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation). **3.** Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Pattern 2. **4.** Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Term 2: April – Week 2

Chapter 26: Helpful Hints – Pattern 2

Maths Action – Whole Class Activity
Continue the Patterns: Arrange the children as a whole class or in table groups for this activity. Display a series of beaded and number patterns on the interactive whiteboard. Provide three options to continue the patten. Invite the children to discuss and agree on the correct choice to continue the patterns. Ensure each child justifies his/her choices.

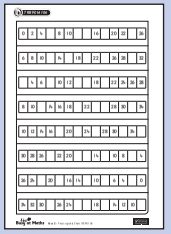
Maths Chat
Talk about why a pattern might be important for jobs like building, tiling, patio paving, etc. Where else might you see patterns? What pattern might you see as you approach or leave a motorway?

Maths Eyes
Look out for examples of patterns you may see in school, at home or in the shops. Look especially for patterns on materials, wallpaper, tiles, road signs, buildings, netting, ladybirds, butterflies, hot air balloons, paving in gardens and swimming pools/class signs/posters/clothing, etc.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Stations

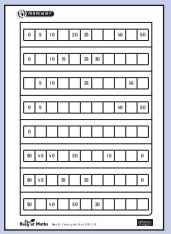
Station 1

Complete Each Pattern in 2s: Give each group/pair/child a copy of **PCM 106**. Ask the children to complete each pattern with multiples of 2. Note that the top part of the number sheet has ascending numbers and is easier than the bottom section.
Differentiation: Invite the children to attempt the lower position of the sheet that has descending numbers.



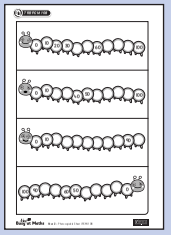
Station 2

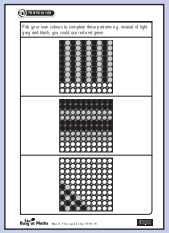
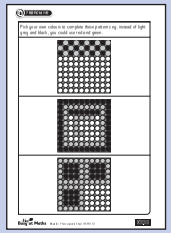
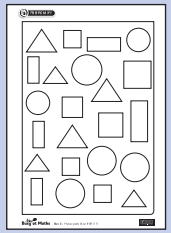
Complete Each Pattern in 5s: Give each group/pair/child a copy of **PCM 107**. Ask the children to complete each pattern with multiples of 5. Note that the top part of the number sheet has ascending numbers and is easier than the bottom section.
Differentiation: Invite the children to attempt the lower position of the sheet that has descending numbers.



Station 3

Complete Each Pattern in 10s: Give each group/pair/child a copy of **PCM 108**. Ask the children to complete each pattern with multiples of 10. Note that the top part of the number sheet has ascending numbers and is easier than the bottom section.
Differentiation: Invite the children to attempt the lower position of the sheet that has descending numbers.



Station 4	**Pegboard Patterns:** Give each child/pair a pegboard and a large number of coloured pegs. Show them one of the patterns from **PCM 109** and have them finish the pattern. Then ask them to copy it on their pegboard. Working in pairs, allow the children to take a turn each, ensuring they discuss and agree on where to place the next peg and what colour it should be. **Differentiation:** Invite the children to finish and copy the more challenging patterns on **PCM 110**.  
Station 5	**Counting in Twos:** Give each pair or group up to 20 interlocking cubes in two colours. Ask them to arrange them in a pattern of 2 yellow/2 green/2 yellow/2 green/2 yellow/2 green/2 yellow/2 green, etc. The children will then count forwards and backwards in 2s to 50 as a whole class in chorus. **Differentiation:** Then ask the children to count in twos forwards and backwards individually.
Station 6	**Counting in Fives:** Give each pair or group up to 50 interlocking cubes in five colours ask them to arrange them in a pattern of 5 red/5 blue/5 red/5 blue/5 red/5 blue/5 red/5 blue, etc. The children will then count forwards and backwards in 5s to 50 as a whole class in chorus. **Differentiation:** Then ask the children to count in fives forwards and backwards individually.
Station 7	**Counting in Tens:** Give each group 50 interlocking cubes equally divided into five different colours. Ask the children to sort the cubes into five towers of 10, with each tower containing cubes of the same colour. As they build each tower, encourage them to count in 10s. Once all the towers have been made, pair each group with another group and ask them to combine their towers. The children will then have 10 towers of 10, representing 100 cubes altogether. Encourage them to arrange the towers in a line and count forwards in 10s to 100, and then count backwards from 100 to 0 in tens. **Differentiation:** Ask individual children to count forwards and backwards in 10s to 100 independently using the towers as a visual support. Children requiring additional support can count alongside a partner.
Station 8	**Shape Patterns:** Give each pair or group a copy of **PCM 111**. Invite the children to cut out the shapes and to place them in different patterns on an A4/A3 page. Ask them to colour the shapes and paste or glue them onto the sheet and hang them on the classroom wall. **Differentiation:** Children can use two or more of each shape, depending on ability. 

April: Week 3	**Chapter 27** (Place Value 3)	**Strand:** Number	**Strand Unit:** Place Value and Base Ten
Core book: Pages 105–109	**Home/School Links book:** Pages 40–41	**Teacher's Resource book:** Pages 82–84	**PCMs:** 15, 80, 83, 112–114

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • understand that 'teen' numbers are made up of 10 plus another number; • use appropriate mathematical language and symbols; • extend, when appropriate, understanding of number beyond 10; • extend activities to include counting in 2s, 5s and 10s; • recognise numbers to at least 20.
Learning Outcome(s)	Understand that digits have different values depending on their place or position in a number. Use estimation to quickly determine number values and number calculations.
Mathematical Concepts	The value of a digit in a number depends on its place. Zero (0) can be used as a placeholder, allowing us to record a number accurately. The position of a digit denotes a value ten times that of the digit to its right. When ten place value units (e.g. ones) are grouped, a new place value unit (e.g. ten) is formed.

Promoting Maths Talk
Making numbers, notation board, abacus, ten frames, grid, expanded form, number words, tens, units, colour, circle, write, show, draw, digits, double.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Place Value 3 can be found on the Chapter 27 Landing Page.

Station Activities 1–6 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations. The early finishers can complete the questions on **PCM 114**, which has a number of What's My Number? questions.

Linkage
Algebra: Pattern
Number: Combining and partitioning, counting, colours

Home Support Sheets:
Send **Home Support Sheet 27** home so parents/guardians can help the children with place value to 50

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Stations
Station 1: Pompom Place Value; **Station 2:** Ten Frame Challenge; **Station 3:** Ten More/Less on the Notation Board; **Station 4:** Ten More/Less on the Abacus; **Station 5:** Make and Change; **Station 6:** Number Detective.

Digital Resources: Chapter 27 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Place Value 3.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
Place Value Bingo: Give each child a copy of **PCM 112** (a blank bingo card). Ask them to write their own numbers between 10 and 50 in the squares on the card. Call out a series of two-digit numbers. If the child has the particular number, they place a counter on it. Decide the winner on the following basis: (a) The child who has a counter in the four corners. (b) The child who has four counters in a diagonal line. (c) The child who has four counters in a horizontal or vertical line. (d) The child who has a counter on all 16 squares.

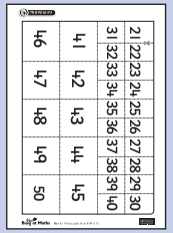
Maths Chat
Invite the children to talk about ages in their family. Ask questions such as, "If you are 7, how old will you be in 10 years?" and "If someone is 30, how old will they be in 10 years? How old were they 10 years ago?" Try different ages, such as 18, 24, 36 and 50.

Maths Eyes
Using the microwave at home or school, invite the children to get help from a parent/guardian to heat something for 50 seconds. Get them to count down from 50 to 0 in time with the microwave.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Stations
Teacher Note: These activities reinforce and extend key skills and concepts from Chapter 23, while providing opportunities for children to apply their understanding to numbers to 50.

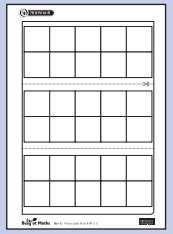
Station 1

Pom pom Place Value: Arrange the children in pairs or small groups. Give each group a copy of **PCM 113**, which has a selection of numbers from 21–50, together with pom poms to represent tens and buttons to represent units. Invite Child A to choose a number from PCM 113, e.g. 28. Invite the other children to make the number using two pom poms to represent 2 tens and eight buttons to represent 8 units. Children say the number as they make it, e.g. "28 is 2 tens and 8 units." Child A checks that the number has been made correctly. Children take turns choosing numbers and making them.
Differentiation: Use numbers from 21–30 for children who need support. Challenge more able children to make numbers from 31–50 and record the number as tens and units, e.g. 28 = 2 tens and 8 units.



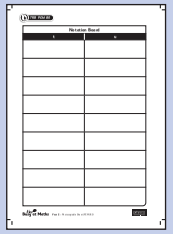
Station 2

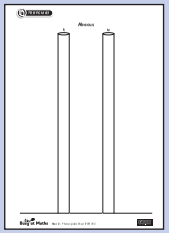
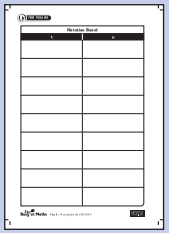
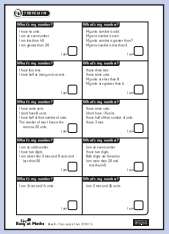
Ten Frame Challenge: Arrange the children in pairs or small groups. Give each group two copies of **PCM 15**, as they will need up to five ten frames, together with a collection of interlocking cubes. Invite Child A to make a number between 21 and 50 on the ten frames. Child B looks at the ten frames for a few seconds before Child A covers them. Child B estimates the number shown and explains how they worked it out. Child A uncovers the ten frames and the children count the cubes to check. Encourage the children to use mathematical language such as tens, units, more than, less than and about. Children then swap roles and repeat with different numbers.
Differentiation: Use numbers from 10–30 for children who need support. Challenge more able children to look at the ten frames briefly and identify the number without counting each cube individually, explaining how the full ten frames helped them work out the number.



Station 3

Ten More/Less on the Notation Board: Arrange the children in pairs or small groups. Give each child or pair a copy of **PCM 80**, which is a blank notation board for tens and units. Also give them nine red counters to represent units and up to five blue counters to represent the tens. Invite Child A to make a number on the notation board. Child B will be asked to make a number that is ten more or ten less on their notation board. Be mindful to select starting numbers that do not exceed 50 when ten more is added.
Differentiation: Invite the children to write the first number followed by the number that is ten more or less.



Station 4	**Ten More/Less on the Abacus:** Arrange the children in pairs or small groups. Give each child or pair a copy of **PCM 83**, which is a blank abacus for tens and units. They will also need nine red counters to represent units and up to five blue counters. to represent the tens. Invite Child A to make a number on the abacus. Child B will be asked to make a number that is ten more or ten less on her/his abacus. Be mindful to select starting numbers that do not exceed 50 when ten more is added. **Differentiation:** Invite the children to write the first number followed by the number that is ten more or less. 
Station 5	**Make and Change:** Arrange the children in pairs or small groups. Give each child a copy of the notation board in **PCM 80**, together with a collection of small classroom objects, e.g. beads to represent tens and pegs to represent units. Invite Child A to make a number on the notation board. Child B then gives an instruction to add or remove units. Child A carries out the instruction. If there are ten units, Child A exchanges them for one ten. Child A says the new number and explains how it has changed. The children then swap roles and continue the activity **Differentiation:** For children who need support, work with numbers from 10–30 and focus on adding or removing one or two units. Challenge more able children to make a number and give a sequence of two or more instructions, explaining the changes each time. 
Station 6	**Number Detective:** Arrange the children in pairs or small groups. Invite Child A to give one clue to the other children as to what the mystery number is using tens and units in the sentences. For example: "I have 2 more units than 30. What number am I?" Children then take turns giving clues. **Differentiation:** Ask the more able children to complete **PCM 114**, which has 'What's My Number' questions. 

May: Week 1	**Chapter 28** (Money 1)	**Strand:** Measures	**Strand Unit:** Money – Coins to 20p
Core book: Pages 110–113	**Home/School Links book:** Pages 42–43	**Teacher's Resource book:** Pages 85–87	**PCMs:** 81–82, 115–117

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • use their number skills in shopping activities; • extend activities to include counting in 2s, 5s and 10; • understand the need to pay for goods; • become familiar with coins in everyday use; • be involved in solving practical problems.
Learning Outcome(s)	Recognise the value of money and use pounds and pence in a range of meaningful contexts.
Mathematical Concepts	Set amounts of money can be represented by different combinations of coins and/or notes. The price of an item or service is determined by its relative value.

Promoting Maths Talk
Number line, 1p, 2p, 5p, 10p, 20p coins, comparing, amounts, equal, draw, total, fill in, sets of money, count, how much.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Money 1 can be found on the Chapter 28 Landing Page.

Station Activities 1–10 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Algebra: Pattern
Number: Combining and partitioning, counting

Home Support Sheets:
Send **Home Support Sheet 28** home so parents/guardians can help the children with 1p/2p/5p/10p/20p coins.

Emphasising Mathematical Modelling / Encouraging Playfulness: Maths Stations
Station 1: Card Flip 1; **Station 2:** Totals to 20p; **Station 3:** Target Numbers; **Station 4:** Trading Up; **Station 5:** Coin Patterns; **Station 6:** Making Money Totals; **Station 7:** Card Flip 2; **Station 8:** Coin Swap; **Station 9:** Shopping and Change; **Station 10:** Get Me to the Shop!

Digital Resources: Chapter 28 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Money 1.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Term 3: May – Week 1

Chapter 28: Helpful Hints – Money 1

Maths Action – Whole Class Activity
Coin Sorter: Give each child or pair some real 1p, 2p, 5p, 10p, 20p coins. If no real coins are available, give them copies of **PCMs 81** and **82**. Ask them to cut out the 1p, 2p, 5p, 10p and 20p coins. Invite them to sort the coins into sets of 1p, 2p, 5p, 10p and 20p as quickly as possible.
Differentiation: Ask the more able children to write the number of coins under each set.

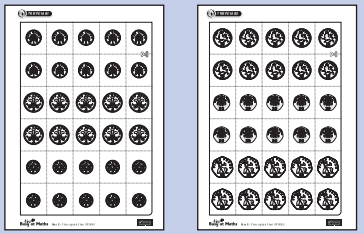
Maths Chat
Invite the children to chat about money in pairs. Tell Child A that their partner has coins (1p, 2p, 5p, 10p, 20p) in both hands but Child A cannot see them. They can pick a hand and keep those coins. There are five coins in Hand A. There are three coins in Hand B. Ask the question: Which hand do you want to pick? Chat with your group or partner and justify your answer – there are a number of answers!

Maths Eyes
Talk about all the places you can use the coins 1p, 2p, 5p, 10p, and 20p in your daily life.

Emphasising Mathematical Modelling / Encouraging Playfulness: Maths Stations

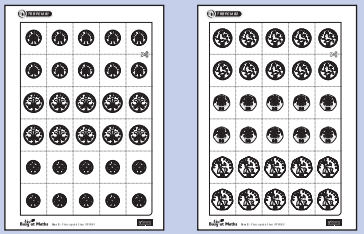
Station 1

Card Flip 1: Give each child or pair some real 1p, 2p, 5p and 10p coins. If no real coins are available, give them copies of **PCMs 81** and **82**. Give each group the playing cards of one suit from 1–10 (remove the court cards) from a normal pack of playing cards. Place the cards face down in the center of the table. Each child, in turn, flips a card. He/she now races to make that number using coins, e.g. if he/she flips a 9, she makes 9p using coins.
Differentiation: The person who flips the card makes 9p using the least number coins.



Station 2

Totals to 20p: Arrange the children individually, in pairs or small groups. Give each child, pair or group some real 1p, 2p, 5p, 10p and 20p coins or a copy of **PCMs 81** and **82**. Ask them to come up with as many different ways to make a total of 20p. Get them to draw or count out the coins, e.g. 10p + 10p or 10p + 5p + 5p or 5p + 5p + 5c + 5p, etc.
Differentiation: Ask the more able children to record the different ways on a blank sheet of paper or in their exercise books.

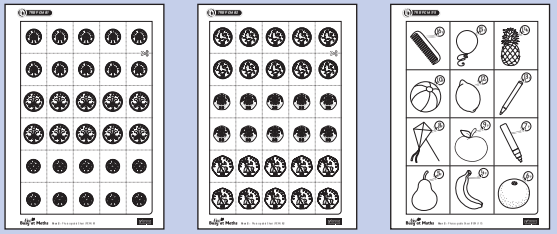
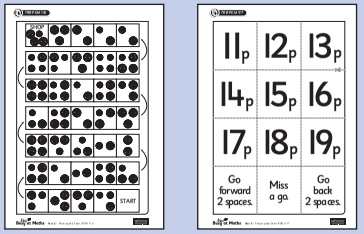


Station 3

Target Numbers: Arrange the children in pairs or small groups. Give each pair or group some real 1p, 2p, 5p, 10p and 20p coins or the coins from **PCMs 81** and **82**. Also give them two dice. Invite the children to roll the two dice in turn. For example: Child A rolls a 5 and a 5 and gets a total of 10p. The other members of the group must race to make the target number using coins. Every time a child gets the correct amount, they get a counter. The child with the most counters after 5, 10, 15 or 20 throws wins the game.
Differentiation: Have the children reach the target number using the least/fewest number of coins.

Station 4

Trading Up: Arrange the children in small groups. Ask them to use the coins from **PCMs 81** and **82**. Each group should have at least 20 x 1p coins, 10 x 2p coins, 10 x 5p coins, 10 x 10p coins, and 10 x 20p coins. Place the coins in the centre of the table and use them as the bank. Appoint one member of each group as the banker. Invite Child A to throw a dice and give them that number of coins, e.g. they throw a 6 and are given 1p + 1p + 1p + 1p + 1p + 1p. These should be traded up for higher denominations: 5p + 1p. Continue playing in the same way. The object of the game is to keep trading up the coins to 20p. The first player to have 5 x 20p coins wins the game.
Differentiation: Increase the number of coins and have the winning child achieve 10 x 20p coins.

Station 5	**Coin Patterns:** Arrange the children in small groups. Give each child in the group about five of each coin from 1p to 20p. Ask the children to order the coins from lowest to highest value or highest to lowest value and to continue the pattern. **Differentiation:** Increase or decrease the number of coins in the pattern depending on the ability of the children.
Station 6	**Making Money Totals:** Arrange the children in small groups. Invite them to roll a dice and race their group to make that amount using coins. The winner rolls the dice again! **Differentiation:** Roll two dice and ask the children to add the totals. Invite them to race their group to make that amount using coins. The more able children should have no difficulty dealing with a total of 20.
Station 7	**Card Flip 2:** Arrange the children in small groups. Give each group playing cards of two or three suits from 1 to 10. Place the cards face down in the centre of the table. Invite each child in turn to flip two cards and add the totals of the two cards. They then race to make that number using coins. For example: if the child flips a 7 and an 8, they make 15p using coins. **Differentiation:** Ask the player who flips the cards to make the money total using the least number of coins.
Station 8	**Coin Swap:** Arrange the children in small groups. Give each child in the group 10 coins at random (from 1p to 20p). Invite the first player (Child A) to swap any number of their coins for one coin of equal value from the next player (Child B) in the group, e.g. 5 x 1p coins for a 5p coin. Then Child B takes their turn and so on. After three, four or five rounds, the player with the least number of coins left wins. **Differentiation:** Increase or decrease the total number of coins available to the group.
Station 9	**Shopping and Change:** Arrange the children in pairs or small groups. Give each pair or group some real 1p, 2p, 5p, 10p and 20p coins or a copy of **PCMs 81** and **82**. Ask the children to cut out the items and price tags from **PCM 115**. Appoint Child A as the shopkeeper, who has some coins for giving change. Invite Child B to pick an item and hand it to the shopkeeper with the price tag. The shopkeeper takes the item and the actual price for it, e.g. a comb costing 16p. Child B must place the required number of coins on the table to make a total of 16p. Play continues until all children buy one or two items. **Variation:** Ensure the shopkeeper gives the correct change from 20p, e.g. a comb costing 16p requires change of 4p. **Differentiation:** Less able children can work with items costing up to 10p from PCM 115. 
Station 10	**Get Me to the Shop!** Arrange the children in small groups. Give them a copy of **PCM 116**, which is the board for the game. Also give them a copy of **PCM 117**, which has coin totals from 11p to 19p as well as three other possible moves in the game. Place these cards in a pile in the centre of the table. Invite all the children to place a different coloured counter at the start. Ask the children to start the game by throwing a dice. The first person to throw a 6 starts the game and picks a card from the pile, e.g. 11p. They then go to the first section that shows 11p. They must place the counter on the correct total. If they put it in the wrong square, they return to their original spot. If they pick the card 'Go back 2 spaces', they must go back two spaces, etc. Continue the game until one player reaches the shop or throws a number greater than the required final amount. 

May: Week 2	**Chapter 29** (Weight)	**Strand:** Measures	**Strand Unit:** Measuring – Weight
Core book: Pages 114–117	**Home/School Links book:** Page 44	**Teacher's Resource book:** Pages 88–90	**PCMs:** 118–119

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • compare two objects of different length, weight, capacity, area; understand and use the language of comparison; • order three objects of different length, weight, capacity, area; talk about the ordering using appropriate language; • use appropriate mathematical language and symbols; • choose and use, with guidance, non-standard units to measure length, capacity, weight; talk about their work.
Learning Outcome(s)	Demonstrate an awareness that attributes such as length, weight, capacity and area can be measured and compared.
Mathematical Concepts	Objects have attributes that can be measured such as length, weight, capacity and area. One of the purposes of measurement is to compare. We can compare and order things by how much of a particular attribute (physical quantity) they have relative to each other.

Promoting Maths Talk
Heavy, heavier, heaviest, lightest, colour, blue, red, estimate, true, false, (guess), balance, test, items.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Weight can be found on the Chapter 29 Landing Page.

Station Activities 1–7 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.
PCM 119 can be given to the early finishers for extra practice on measuring weights if not already covered in Station 7.

Linkage
Number: Counting, Numeration, Ordinal Number

Home Support Sheets
Send **Home Support Sheet 29** home so parents/guardians can help the children with the concept of weight/weighing.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Weight Names; **Station 2:** Comparing Weights; **Station 3:** How Many Cubes? **Station 4:** Weighing Using Lollipop Sticks; **Station 5:** Paint Bottle Line-Up; **Station 6:** Which is Heavier? **Station 7:** Weighing Different Items.

Digital Resources: Chapter 29 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Weight.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

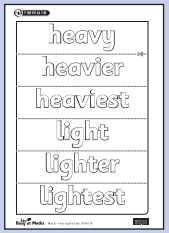
Maths Action – Whole Class Activity
Which is heavier/heaviest? Hold up two items for comparison: a brick and a stone; a small book and a large book, a banana and an apple, etc. Ask the children: 'Which do you think is heavier?' Ask them to justify the answer.
Do a similar activity but add another item, e.g. brick, a stone and a lunchbox. The children should come to the top of the class and hold the objects in their hands to compare the weights.

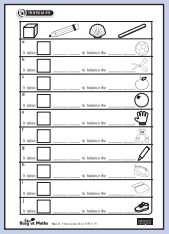
Maths Chat
1. In groups, the children take turns calling out the names of any two items they can see in the classroom (e.g. chair or table or scissors or book). The other children try to be the quickest to say which is heavier. Then they try the game for which of any two items you can see in the classroom that is lighter.
2. Talk about all the places where you might see people weighing items: butcher, shop, fruit merchant, babies in a hospital.

Maths Eyes
Put your pencil case in the balance. Have a look around the classroom. Find something that is lighter than it. Then find something in the classroom that is heavier than it. Draw your pictures.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations

Station 1	**Weight Names:** Give the children copies of **PCM 118**, which has the weight names heavy, heavier, heaviest, light, lighter, and lightest. Ask the children to trace around each word and to then colour the words. **Differentiation:** Ask the children to source three objects in the class and to order them by weight, from lightest to heaviest. They can put the proper weight name (light, lighter, lightest, heavy, heavier and heaviest) under the different objects.
Station 2	**Comparing Weights:** Give each pair/group three shoe boxes/baskets and a large variety of objects to compare weights: toy car, teddy, cubes, pebbles, marble, brick, shoes, paperclip, marker, stone, etc. Ask the children to place the items in the boxes/baskets and then to lift them to compare the weights. **Differentiation:** The children can write the correct weight word and place it on the appropriate box.
Station 3	**How Many Cubes?** Give each group some Lego bricks or cubes and four small objects to weigh using a (bucket) balance. Items to weigh could include: Pritt stick, scissors, rubber, pencil sharpener, paperclip, crayon, pencil, etc. Ask the children to estimate their answer first. When they have weighed the four items, ask the children to line them up from lightest to heaviest. **Differentiation:** Depending on ability, increase or decrease the number of items to be weighed.
Station 4	**Weighing Using Lollipop Sticks:** Give each group some lollipop sticks. Ask the children, in turn, to place a pencil on the (bucket) balance. How many lollipop sticks does the pencil weigh? Ask them to estimate their answer first and to write the estimate on their whiteboards. Then, get everyone in the group to weigh their pencil to verify their answers. **Differentiation:** Ask the children to line up their pencils from lightest to heaviest.
Station 5	**Paint Bottle Line-Up:** Give each group four different coloured bottles of paint with different amounts of paint in each. It is best to not use bottles that are too full as they will be more difficult to weigh using non-standard units of measure. The children should hold each one, in turn, in their hand and then predict how the bottles will line up from lightest to heaviest. The children could hold a bottle in each hand for comparison also. Ask the children to weigh each bottle on the (bucket) balance using marbles/cubes, etc. Ask the children to then line up the bottles from lightest to heaviest. **Differentiation:** Ask the children to draw the bottles and number them 1–4 in order from lightest to heaviest.



Station 6	**Which is Heavier?** Give each group some objects that look the same but have different weights. You need two boxes (shoe boxes or smaller). Have one box empty but have some pebbles/stones in the other. Ask the children to estimate which box is heavier/the same weight as their objects. Ask the children to test their results by handling the boxes. **Differentiation:** Have three similar boxes with different amounts in each one.
Station 7	**Weighing Different Items:** Give each child, pair or group a copy of **PCM 119**. Ask the children to find the weights of 10 objects using cubes, pencils, shells and lollipop sticks. They write their answers on PCM 119. Ask them to estimate their answers first. They should give reasons for (justify) their answers. **Differentiation:** Some children may find the weights of a few objects, while others will complete the whole PCM. 

May: Week 3	**Chapter 30** (Time 3)	**Strand:** Measures	**Strand Unit:** Time
Core book: Pages 118–121	**Home/School Links book:** Pages 45–46	**Teacher's Resource book:** Pages 91–93	**PCMs:** 86–88, 120–122

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • talk about significant times on the clock; • explore time patterns; • use appropriate mathematical language and symbols; • be involved in solving practical problems.
Learning Outcome(s)	Understand how time is measured, expressed and represented. Explore equivalent expressions of time
Mathematical Concepts	The hour and minute hands of the analogue clock move clockwise as time passes. The two (sometimes three) hands move at different speeds, according to the units of time they are showing. Units of time measure how long something lasts. Time can be represented in both analogue and digital formats.

Promoting Maths Talk
Time, analogue, digital clock, sixty, thirty, minutes, hours, half-hour, how many, face, hand, one, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, past, half past, write, draw, make the time.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Time 3 can be found on the Chapter 30 Landing Page.

Station Activities 1–5 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting, complementary addition, colours

Home Support Sheets:
Send **Home Support Sheet 30** home so parents/guardians can help the children with half-hours on the analogue and digital clocks.

Emphasising Mathematical Modelling / Encouraging Playfulness: Maths Stations
Station 1: Dice Half-Hours; **Station 2:** Domino Half-Hours; **Station 3:** Make the Analogue Time; **Station 4:** Make the Digital Time; **Station 5:** At What Time Do You Do This?

Digital Resources: Chapter 30 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Time 3.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Term 3: May – Week 3

Chapter 30: Helpful Hints – Time 3

Maths Action – Whole Class Activity
Make Half-Hour Times: Ask the children to use the clock faces they made for Chapter 19 using **PCM 86** and **PCM 87**. Call out a number of different hour times, e.g. eight o'clock. Ask each child to make that time on their clock. Do this for all hours. Continue by asking the children to make a number of different half-hour times, e.g. half past six. Encourage the children or pairs to chat to each other to justify their answers.

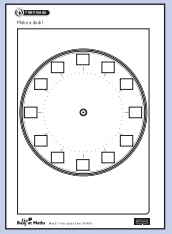
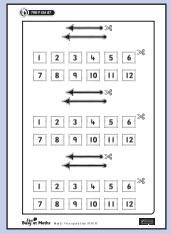
Maths Chat
Ask the children to talk about the time it takes them to complete some of their daily activities, e.g. getting dressed, brushing their teeth, eating breakfast, or walking to school. Ensure they justify their reasons to the other members of their group.

Maths Eyes
Ask the children to look at the analogue or digital clock faces in the classroom or school at different times of the day and to tell the times.

Emphasising Mathematical Modelling / Encouraging Playfulness: Maths Stations

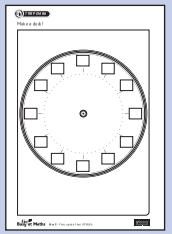
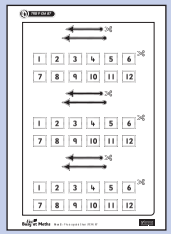
Station 1

Dice Half-Hours: Arrange the children in small groups. Give each child a real clock or the one they made in Chapter 19 from **PCM 86** and **PCM 87**. Appoint Child A as the leader and get them to roll two dice. Invite the other children in the group to add the total, e.g. 4 and 3 to get 7. Ask everyone in the group to race to show half past the hour of the two dice total on their clocks, i.e. half past seven.
Differentiation: Have some children focus on the numbers from rolling only one dice using numbers from 1 to 6.

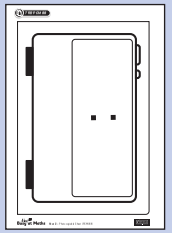
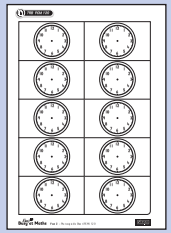
Station 2

Domino Half-Hours: Arrange the children in small groups. Give each child a real clock or the one they made in Chapter 19 from **PCM 86** and **PCM 87**. Also give each group about 15/20 dominoes. Place the dominoes face down in the middle of the table. Invite the children to take turns rolling a dice to see who goes first. The first child to roll a 6 goes first (Child A). Child A starts and turns over a domino and has the option of adding or subtracting the two numbers, e.g. 6 + 4 = 10 or 6 – 4 = 2. They then decide and ask the others in the group to race to show half past the hour on their clocks, i.e. half past ten or half past two.
Differentiation: Have the children concentrate on adding the numbers or subtracting them only.

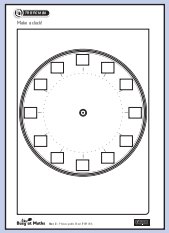



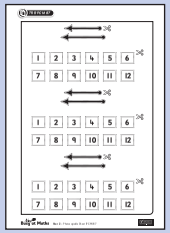
Station 3

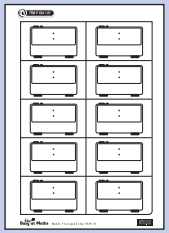
Make the Analogue Time: Arrange the children in pairs or small groups. Invite Child A to write or show a half-hour digital time on a real clock or the clock face they were given for Chapter 19 from **PCM 88**, e.g. 4:30. Get the others in the group to race to show 4:30 as half past four on the first analogue clock on **PCM 120**. Have the children take turns showing different half-hour times on the digital clock until all 10 analogue clocks are completed on PCM 120.
Differentiation: Reduce the number of analogue clocks that need to be completed depending on the ability of the class.

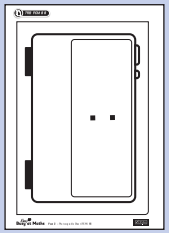
Station 4	**Make the Digital Time:** Invite Child A to write or show a half-hour analogue time on a real clock or on the one they made in Chapter 19 from **PCM 86** and **PCM 87**, e.g. half past six. Get the others in the group to race to show half past six as 6:30 on the first digital clock on **PCM 121**. Have the children take turns showing different half-hour times on the analogue clock until all 10 digital clocks are completed on PCM 121. **Differentiation:** Reduce the number of digital clocks that need to be completed depending on the ability of the class.
Station 5	**At What Time Do You Do This?** Arrange the children in pairs or small groups. Give each group a copy of **PCM 122**, an analogue clock they made in Chapter 19 from **PCM 86** and **PCM 87**, or a digital clock template from **PCM 88**. Ask them to cut out each of the 10 activity strips and place them face down on the table. Invite the children to take turns turning over a strip and reading it aloud to the group. They then all race to show the approximate time at which they would complete that activity, to the nearest half hour, e.g. 'I eat my breakfast' could be shown as half past eight. **Differentiation:** Reduce the number of sentences depending on the ability of the class.











June: Week 1	**Chapter 31** (Subtraction 2)	**Strand:** Number	**Strand Unit:** Sets and Operations
Core book: Pages 122–126	**Home/School Links book:** Pages 47–48	**Teacher's Resource book:** Pages 94–97	**PCMs:** 102–105

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • compare sets by matching objects/counting objects to understand the terms 'more than', 'less than', 'the same'; • investigate the relationship between addition and subtraction in practical situations; • count forwards/backwards in ones within 5/10 from different starting points; • use appropriate mathematical language and symbols; • be involved in solving practical problems.
Learning Outcome(s)	Select, make use of and represent a range of addition and subtraction strategies.
Mathematical Concepts	Representation of subtraction can include reduction, complement and difference. In a number sentence, number facts can be applied to help find an unknown value. Numbers and symbols are used to construct and express number sentences. These can help to solve problems or are used to express contexts mathematically.

Promoting Maths Talk
Subtract, subtraction, difference, count, cross out, number line, reduction, colours, green, yellow, purple, orange, blue, brown, red, how many, insert.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Subtraction 2 can be found on the Chapter 31 Landing Page.

Station Activities 1–10 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations. The early finishers can complete the questions on **PCM 105**.

Linkage
Number: Counting, complementary addition, colours

Home Support Sheets:
Send **Home Support Sheet 31** home so parents/guardians can help the children with subtraction within 10.

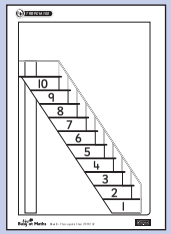
Emphasising Mathematical Modelling / Encouraging Playfulness: Maths Stations
Station 1: Equal Towers; **Station 2:** Ten-in-a-Bag; **Station 3:** Down the Stairs from 10; **Station 4:** Four-in-a-Row; **Station 5:** Playing Card Subtraction; **Station 6:** Jigsaw Subtraction; **Station 7:** The Hidden Card; **Station 8:** Rows of Coins; **Station 9:** Do I Add (+) or Subtract (–)? **Station 10:** Number Line Subtraction.

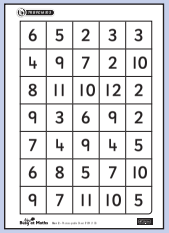
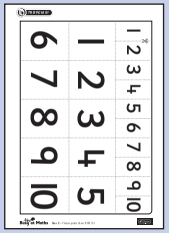
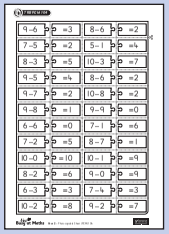
Digital Resources: Chapter 31 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw a face at the bottom of each page showing how he/she feels about his/her progress.
2. Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interactions – conferencing with the child to ascertain his/her thought process about a specific topic: Subtraction 2.
4. Assessment events – formal, designed tests, as in the assessment booklet, testing the children at the end of each term.

Maths Action – Whole Class Activity	**Maths Chat**	**Maths Eyes**
Countdown to Zero: Do this activity as a whole class activity or arrange the children in pairs. Call out a number, e.g. 10, and then call out a smaller number, e.g. 8. The children have to reach the target of 2 by making a subtraction sentence, e.g. 10 to 8: 10 – 8 = 2.	Talk about how you can add a number to your answer to check that you are correct after completing a subtraction question.	Do this activity as a whole class activity or arrange the children in pairs. Give each child/pair a number line from 0 to 10. Call out a number, e.g. 9, and then call out a smaller number, e.g. 4. The child has to put their finger on the 9 and count back until they get to 4. They then call out how many jumps they had to take.

Emphasising Mathematical Modelling / Encouraging Playfulness: Maths Stations
Note that Stations 1 – 6 activities were dealt with in Chapter 25, as they involve subtraction within 10.

Station 1	**Equal Towers:** Arrange the children in pairs or small groups. Give them Dienes blocks/cubes/Lego bricks, etc. to work with. Invite them to take turns to build a tower of up to 10 blocks each using two different colours. Child A must build a tower and Child B must build a tower of equal size, e.g. Child A builds a tower of 8, with 4 blue and 4 red. Child B could build a tower with 5 yellow and 3 red, while Child C could build the tower with 2 blue and 6 pink, etc. Continue in this way, with children taking turns to build their towers and the others then making equal towers using different amounts and colours. **Differentiation:** Allow some children to concentrate on building towers with no more than five or six blocks.
Station 2	**Ten-in-a-Bag:** Arrange the children in pairs or small groups. Give each pair or group a bag, box or container and ask them to count 10 items into it. The items can be anything small, such as counters, crayons, blocks, etc. Invite Child A to remove a small handful of items and count them out. The next player in turn has to estimate (guess) how many are left in the bag. A point is awarded for each correct answer. A bonus point is awarded for saying the correct word sentence for that play. **Differentiation:** Use more or less than 10 items in the bag.
Station 3	**Down the Stairs from 10:** Arrange the children individually or in small groups. Give each player a copy of **PCM 102**, which is a flight of stairs with the numbers descending from 10 to 1 to reach the bottom. Give each child or group one dice and invite the players to take turns at throwing the dice. They must count back the result of the throw from 10 and call out the number sentence, i.e. 10 – 4 = 6. Players take turns to come down the stairs, but must throw an exact number to finish the game. **Differentiation:** Ask the children to write the number sentence on their whiteboards, e.g. 10 – 4 = 6. 

Station 4	**Four-in-a-Row:** Arrange the children in small groups. Give each member of the group a copy of **PCM 103**, which is a Bingo grid with numbers 1–12. The game requires two dice to be thrown at one time. To start the game, invite the children to throw one dice. The first child who throws a 6 starts the game. When he/she throws the two dice, they must add the totals, e.g. 3 + 6 = 9. Place the numeral cards 1–10 (**PCM 51**) in a pile in the centre of the table – a few copies of each numeral card. The player must select a numeral card, e.g. 3, and subtract that number from the total on the two dice, e.g. 9 – 3 = 6. If the number to be subtracted is too big, they take another turn. If they get the subtraction question correct, e.g. 9 – 3 = 6, they colour the number 6 on PCM 103. The first child to colour four numbers in a row wins the game. Note that the numbers on the dice may go to 12, but that is not a problem for most children! **Differentiation:** Decide that the winner is the person who gets two or three groups of four numbers in a row.  
Station 5	**Playing Card Subtraction:** Arrange the children in pairs or small groups. Ask them to place the cards 1–10 from one suit of an ordinary pack of playing cards face down in the centre of the table. Child A picks two cards and looks carefully at them. They then must take the smaller number from the bigger one, e.g. 8 of hearts – 3 of hearts = 5. If they get the subtraction correct, they get a counter. The child with the most counters after a designated number of rounds wins the game. **Differentiation:** Have the children write each subtraction sentence in their exercise books.
Station 6	**Jigsaw Subtraction:** Arrange the children in pairs or small groups. Give each pair or group a copy of **PCM 104**, which has two sets of subtraction questions and two sets of subtraction answers. Ask the children to cut out the individual subtraction questions and answers. Place all the question cards in a pile in the centre of the table. Place all the answer cards face up on the table. Invite Child A to pick a question card and read it. They then look at the answer cards and place the correct answer beside the question (as a number sentence). If the correct answer is given, the child wins a counter. The children then take turns. After an agreed number of rounds, the child with the most counters wins the game. **Differentiation:** Increase or decrease the number of questions and answers in the centre of the table. Some children may do only one section of the subtraction questions, while others will complete PCM 104 entirely. 
Station 7	**The Hidden Card (subtraction):** Arrange the children in pairs or small groups. Give each pair or group a pack of playing cards. Ask them to remove all the court (picture) cards. Use the ace as 1 and the joker as zero (if required). Invite Child A to make a playing card number sentence on the table, e.g. 7 + 2 = 9. Ask the other children in the group to close their eyes or turn around. Flip one of the cards over and ask: 'What number is hidden?' Do this with a selection of number sentences. **Variation:** Ask each child to make their own hidden card number sentences and remove a card. **Differentiation:** Make the game more difficult by using three cards, e.g. 2 + 3 + 1 = 6, and remove one card.
Station 8	**Rows of Coins (subtraction):** Arrange the children in pairs or small groups. Invite each pair or group to place a row of up to ten 1p coins on the table, e.g. nine 1p coins. Then get them to place a row of six 1p coins directly under the row of nine coins. Place the coins in one-to-one correspondence so that the children can clearly see the difference between the two rows. Now ask questions or allow the children to compose their own questions, such as: How many coins are in the top row? How many coins are in the bottom row? Which row has more coins? Which row has fewer coins? How many more coins are in the top row? **Differentiation:** Increase or decrease the number of coins used.

Station 9	**Do I Add (+) or Subtract (–)?** Arrange the children in small groups. Give each group a number of simple word problems that require either addition or subtraction. Ensure that each child is able to choose the correct operation – addition or subtraction. **Example A:** 'I had three stamps. I bought five stamps in the post office. How many stamps had I then?' Ask questions such as: Had I more or fewer stamps then? Would it be a good idea to subtract? Why would it be a better idea to add? **Example B:** 'I had eight eggs. I used five eggs to make a cake. How many eggs had I then?' Ask questions such as: Had I more or fewer eggs then? Would it be a good idea to add? Why would it be a better idea to subtract? **Example C:** 'I had nine clothes pegs. I lost seven. How many clothes pegs had I left then?' **Example D:** 'There were eight books on a shelf. I read six of them. How many of the books had I not read?' **Differentiation:** Allow the children to make up their own addition or subtraction questions for the other members of the group to solve.
Station 10	**Number Line Subtraction:** Arrange the children in small groups. Invite them to use their own number line 1–10. Give them some subtraction questions written on Post-it notes or pieces of paper, e.g. 8 – 5 = ? Ask Child A to place a counter on the bigger number and to count back five places on the number line. Ask questions such as: Where were you at the start? How many spaces did you go back? On what number did you land? So, 8 – 5 = 3. Note that this can be done with any number of questions within 10. **Differentiation:** Increase or decrease the number of questions given to different groups.

June: Week 2	**Chapter 32** (Fractions: Half ½)	**Strand:** Number	**Strand Unit:** Fractions
Core book: Pages 127–131	**Home/School Links book:** Pages 49–50	**Teacher's Resource book:** Pages 98–100	**PCMs:** 21, 123–124

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • carry out mental calculations such as 1 more/less than up to 20, doubles up to 10 and mentally add and subtract within 10; • be involved in solving practical problems; • use appropriate mathematical language and symbols.
Learning Outcome(s)	Recognise and name fractions according to their part-whole relationships. Understand that shapes and their line segments can be reflected, rotated and translated.
Mathematical Concepts	Fractions are named according to their number of equal parts or shares. Each equal share of a set has the same value. The greater the number of portions of a whole, the smaller the size of each portion.

Promoting Maths Talk
Partitioning, draw, colours, shapes, fractions, answers, halves, squares, share/sharing, equal/equally, doubles, coins, symmetrical.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Fractions: Half (1/2) can be found on the Chapter 32 Landing Page.

Station Activities 1–5 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting, Numeration, Ordinal Number
Data and Chance: Colours
Shape and Space: 2-D Shapes

Home Support Sheets
Send **Home Support Sheet 32** home so parents/guardians can help the children with fractions (½ or half).

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations
Station 1: Partitioning on the Whiteboard; **Station 2:** Playdough Halves; **Station 3:** Paper Folding; **Station 4:** Doubles/Halves; **Station 5:** Butterfly Symmetry.

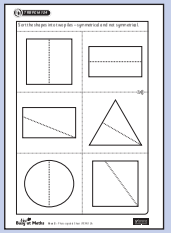
Digital Resources: Chapter 32 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Fractions: Half (1/2)
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Maths Action – Whole Class Activity
Fraction Loop Game: This can be done towards the end of the week and can be played by 11 children at a time. The other children can listen to the game. Give each child a loop card from **PCM 123**. The child who has the card that says START, begins – ½ of 6! The child who has the answer says, 'I have 3. Who has ½ of 14?'. The game continues until the last child reads out FINISH.

Maths Chat
1. Ask the children to chat about items/objects that can be partitioned (shared) in real life – pizza slices, cake slices, sweets, coins, etc. Ask them what they consider to be the best item to use to partition other items.
2. Talk about different places where we can see symmetrical shapes in the classroom, school, playground or at home.

Maths Eyes
Ask a group of 2, 4, 6, 8 or 10 children to stand in a line at the front of the class. How quickly can they split into two equal or unequal groups? The other children in the class should call out the partition number sentence.

Emphasising Mathematical Modelling/Encouraging Playfulness: Maths Action Stations	
Station 1	**Partitioning on the Whiteboard:** Give the children between 7 and 10 Lego bricks, attribute bears, pencils, markers, counters, etc. and their whiteboards. Ask them to draw a line down the middle of the whiteboard. With a partner, the children take turns sharing objects between the two sides of the whiteboard. When they have shared out the items, ask them to call out the number sentence. **Differentiation:** Ask the children to write the different number sentences at the bottom of their whiteboards.
Station 2	**Playdough Halves:** Arrange the children in pairs or small groups. Each group needs pots of playdough, rolling pins and safe cutting tools. Invite the children to make playdough cakes/pizzas/rectangles/circles/squares, etc. When they have made an object, they must cut it into two equal pieces (halves). They must place the two pieces on top of each other to justify (check) that they are equal. **Differentiation:** The children can work individually or in pairs. They may complete the activity as many times as they can, working at their own pace within the allotted time.
Station 3	**Paper Folding:** Give each child a copy of **PCM 124**. Ask them to cut out each shape. They must fold the shapes along the dotted lines to identify if the shape is symmetrical or not. They can then sort the shapes into two groups: (a) symmetrical, (b) not symmetrical. **Extension:** Shift the focus from 'symmetry' to 'half'. Invite the children to cut each shape along the dotted line. They must place one side on top of the other, to verify/justify that they are the exact same size so the line of symmetry cuts the shape in half. **Differentiation:** Some children might focus on a limited number of the shapes found on PCM 124. 
Station 4	**Doubles/Halves:** The children work in pairs, facing each other. Child A holds up any number of fingers (between 1–10). Child B must hold up the same amount of fingers. The children must identify the double they have made, e.g. 7 + 7 = 14. **Extension:** After identifying the double, encourage the children to also identify half of the total, e.g. 7 + 7 = 14, so ½ of 14 is 7. **Differentiation:** Children might focus on all the doubles between 1–20 or reduce the focus to the doubles between 1–10.

Station 5

Butterfly Symmetry: Each child needs a paper copy of the butterfly outline on **PCM 21**. Ask the children to fold the butterfly in half down the line of symmetry. They can then open the butterfly again. Invite them to put blobs of paint on one side of the butterfly. They must then fold the butterfly in half, along the line of symmetry, rubbing the dry half of the page against the painted half. The children can unfold the butterfly to reveal their symmetrical design.
Differentiation: Some children may need their butterfly template to be pre-folded along the line of symmetry before beginning the activity.

June: Week 3	**Chapter 33** (Money 2)	**Strand:** Measures	**Strand Unit:** Money
Core book: Pages 132–136	**Home/School Links book:** Pages 51–52	**Teacher's Resource book:** Pages 101–103	**PCMs:** 81–82, 125–126

Statutory Requirements for Foundation Stage Mathematics and Numeracy	*Through practical, playful and engaging learning experiences, pupils should be enabled to:* • use their number skills in shopping activities; • investigate the relationship between addition and subtraction in practical situations; • become familiar with coins in everyday use; • count forwards and backwards from different starting points; • be involved in solving practical problems.
Learning Outcome(s)	Recognise the value of money and use pounds and pence in a range of meaningful contexts.
Mathematical Concepts	Various strategies can be used to calculate change in a transaction. The price of an item or service is determined by its relative value.

Promoting Maths Talk
Number line, change, challenge, hop, buy/bought, 10p, 20p, pence, fill in, add, calculate.

Emphasising Mathematical Modelling/ Encouraging Playfulness
Digital activities for Money 2 can be found on the Chapter 33 Landing Page.

Station Activities 1–5 can be completed in small groups on a day of teacher's choice.
Note: *Some of these activities mirror the Maths Action/Maths Chat/Maths Eyes tasks in the digital resources for this chapter.*

Differentiation
Differentiated exercises are included in the Maths Action Stations.

Linkage
Number: Counting, numeration
Shape and Space: Shape
Measures: Length of time

Home Support Sheets:
Send **Home Support Sheet 33** home so parents/guardians can help the children with money to 20p.

Emphasising Mathematical Modelling / Encouraging Playfulness: Maths Stations
Station 1: Coins in the Pond; **Station 2:** Roll and Count the Change; **Station 3:** Target Counting Using Dominoes; **Station 4:** Food Shopping and Change; **Station 5:** Buying Two Foods.

Digital Resources: Chapter 33 Landing Page

Assessment:
1. Self-assessment – the child is instructed to draw the correct face at the bottom of each page showing how he/she feels about his/her progress.
2. Formative/Intuitive assessment – ongoing, informal and unrecorded regular assessment (observation).
3. Planned interaction – conferencing with the child to ascertain his/her thought process about a specific topic: Money 2.
4. Summative assessment – formal, designed tests, as in the assessment booklet, testing the children at the end of each half-term.

Term 3: June – Week 3

Chapter 33: Helpful Hints – Money 2

Maths Action – Whole Class Activity
Target Number: Ask the children to place their money number line from **PCM 125** in front of them. They will also need a counter. Call out an amount on the number line, e.g. 4p. Then give a target amount, e.g. 7p, and ask the children to count on to reach the target amount. Ensure that they count on three steps on the number line. Invite them to write the number sentence on a sheet of paper, e.g. 4p + 3p = 7p. Repeat with a range of target amounts.

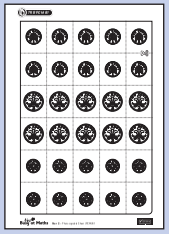
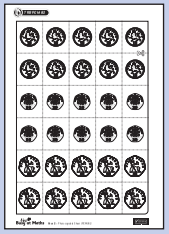
Maths Chat
Chat about some of the things you have bought in a shop using coins and some of the things people use notes to buy.

Maths Eyes
Look around the classroom and pick out some of the items you would be able to buy with coins. What things can you see that people would use notes to buy?

Emphasising Mathematical Modelling / Encouraging Playfulness: Maths Stations

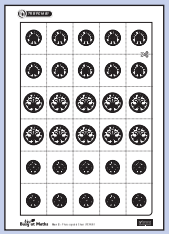
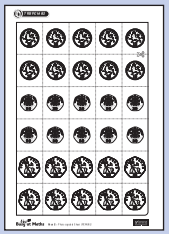
Station 1

Coins in the Pond: Arrange the children in pairs or small groups. Give them a wide selection of real 1p to 20p coins or coins from **PCMs 81** and **82** (multiples of each are required) and two dice. Place all the coins inside a large circle, e.g. a mini-hula hoop, on a tray or cardboard plate, etc. Appoint Child A as the banker. Invite Child B to throw the dice twice and count the total (e.g. 6 + 4 = 10p). They then get that amount from the banker. Have the children take turns and continue playing until no more coins can feasibly be selected from the pond, given the combinations remaining.
Differentiation: Get the children to work with a greater or smaller number of coins. Give three dice rather than two to the more able children.

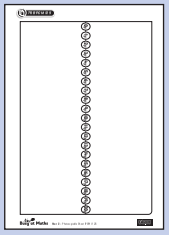
Station 2

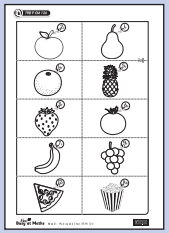
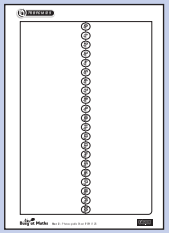
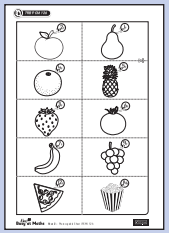
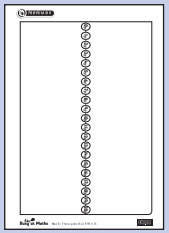
Roll and Count the Change: Arrange the children in pairs. Give each pair a six-sided dice. Appoint Child A as the customer and Child B as the shopkeeper. Give the customer a real 10p coin, where possible. If not, use the coins from **PCMs 81** and **82**. Invite Child B to roll the dice to decide how much money the customer has to pay them (the shopkeeper.) Child A hands the 10p coin to the shopkeeper. The shopkeeper gives change to the customer using the counting-up method. Ask the children to take turns being the shopkeeper and customer.
Differentiation: Use a nine-sided dice where the subtraction or counting on would be easier for some children.

Station 3

Target Counting Using Dominoes: Arrange the children in pairs to practise using the money number line 0p–20p. Give each pair a copy of **PCM 125**, a counter each and as many dominoes as possible. Place all the dominoes face down on the table. Invite Child A to call out a target number between 1p and 20p, e.g. 16p. Child B has to reach that number by picking two separate dominoes. If they pick a domino with a 3 and a 4, they add them to get 7. They then place their counter at zero (0p) on the number line and count up to land on 7p. They then have to pick another domino, e.g. a 5 and a 1, and add them to get a total of 6. They now move forward six more spaces on the number line to get to the target of 13p by counting on. They still have to reach the target number of 16p by counting on another 3p. If they reach the target correctly by saying 'I must count on 3', they win a cube or counter. Child B now calls out a target number between 1 and 20, e.g. 18. Child A has to reach that number by picking two separate dominoes. If they pick a 3 and a 2, they place their counter at zero (0p) on the number line and count up to land on 5p. They then have to pick another domino, e.g. a 4 and a 2, and add them to get a total of 6. They now move forward six more spaces on the number line to get to 11p by counting on. They still have to reach the target number of 18p by counting on another 7p. If they reach the target correctly by saying 'I must count on 7p', they win a cube or counter. The child at the end of three, four or five games with the most cubes wins.
Variation: Play the same game using a six-sided dice or one six-sided and one nine-sided dice.
Differentiation: Use fewer dominoes, all with lower totals for some children.



Station 4	**Food Shopping and Change:** Arrange the children in pairs. Give each pair a copy of the food cards from **PCM 126**. Ask the children to cut out the cards and spread all the cards that show items that cost less than 10p face down on the table. (The remaining two cards with items costing 12p and 14p are not needed for this activity). Appoint Child A as the customer who turns over a card. Appoint Child B as the shopkeeper, who must calculate the change using real coins or coins from **PCMs 81** and **82**. Invite Child A to hand a 10p coin to Child B, the shopkeeper, who counts up the change. Ensure the children use the money number line on **PCM 125** to help them count on. **Differentiation:** Limit the fruits to five as shown in the Core book on page 133.	 
Station 5	**Buying Two Foods:** Arrange the children in pairs. Give each pair a copy of the cards from **PCM 126**. Ask the children to cut out the cards and spread them face down on the table. Appoint Child A as the customer, who turns over two cards. Appoint Child B as the shopkeeper, who must calculate the total cost of the two items, e.g. banana at 7p and apple at 2p = 9p. They must then calculate the change from 20p. Child A, the customer, must hand a 20p coin to Child B, the shopkeeper, who counts up the change. Ensure the children use the money number line from **PCM 125** to help them count on. **Differentiation:** Limit the number of items the children will use and also other children may turn over any three cards.	 

Assessment Overview



Assessment and Record-Keeping

Assessment is the process of generating, gathering, recording, interpreting, using and reporting evidence of learning in individuals, groups or systems, which relies on a number of instruments and methods. Educational assessment provides information about progress in learning.

A variety of assessment tools are outlined in the ***New Busy at Maths*** programme to highlight how teachers can use the results of assessment to make learning more enjoyable, more motivating and more successful for each child.

The *Individual Pupil Profile Assessment Booklet* is available as part of the ***New Busy at Maths*** programme and is of huge benefit to children, teachers and parents/guardians. There are **five** separate assessments featured:

1. Halloween
2. Christmas
3. End of February
4. Easter
5. Summer



These assessment tests provide a summative account of each child's progress during the academic year. From Year 3 onwards, added revision/ assessment tests are included in the Core book at regular intervals to assess each child's progress.

The *Individual Pupil Profile Assessment Booklet* is provided free of charge as part of the ***New Busy at Maths*** programme and functions as an individual record for each child. The teacher then keeps the individual record in the school. These records can be used for further planning for teaching and learning. These can also be passed on from class to class so that children begin their next class learning from the proper base level.

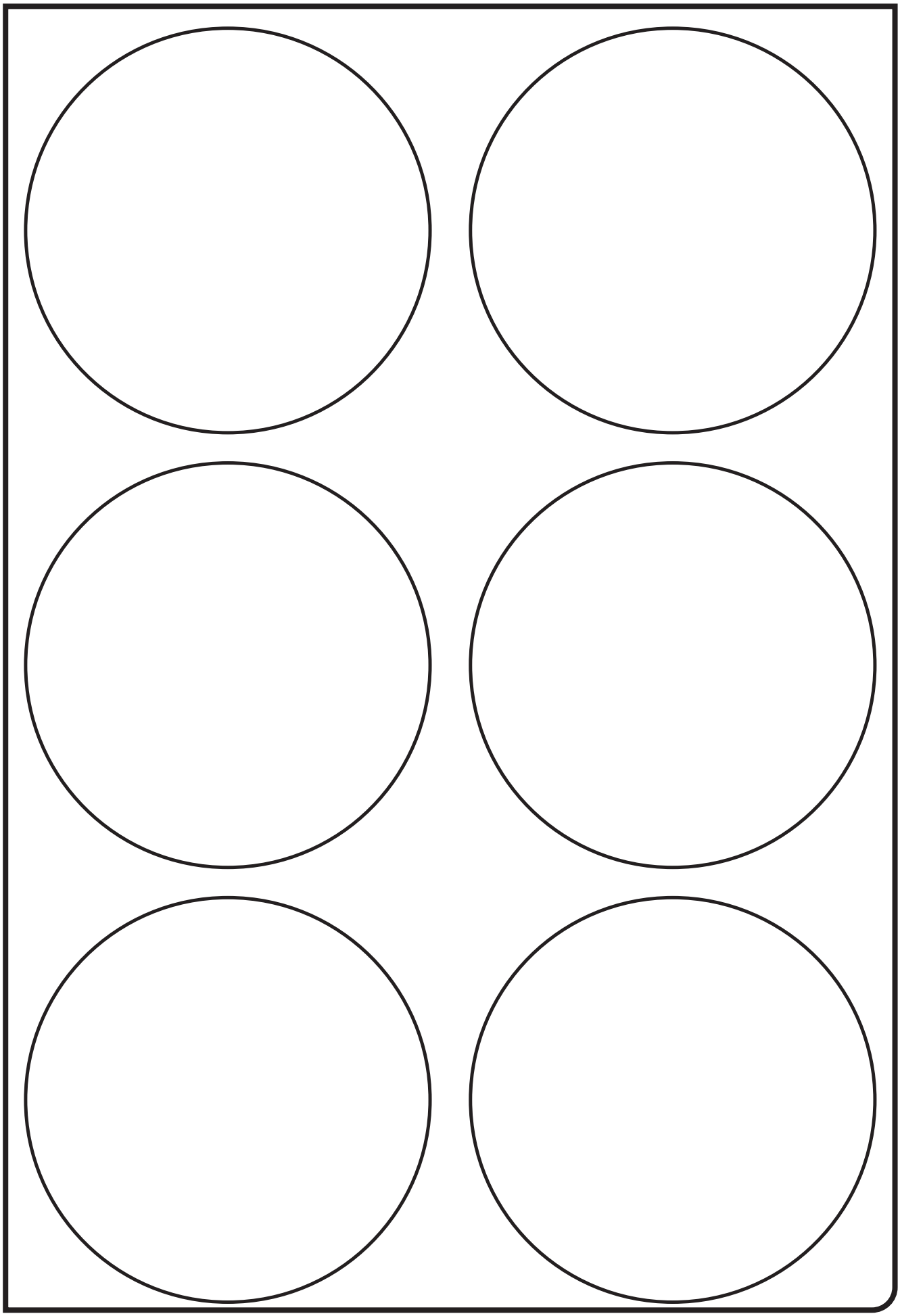
New Busy at Maths

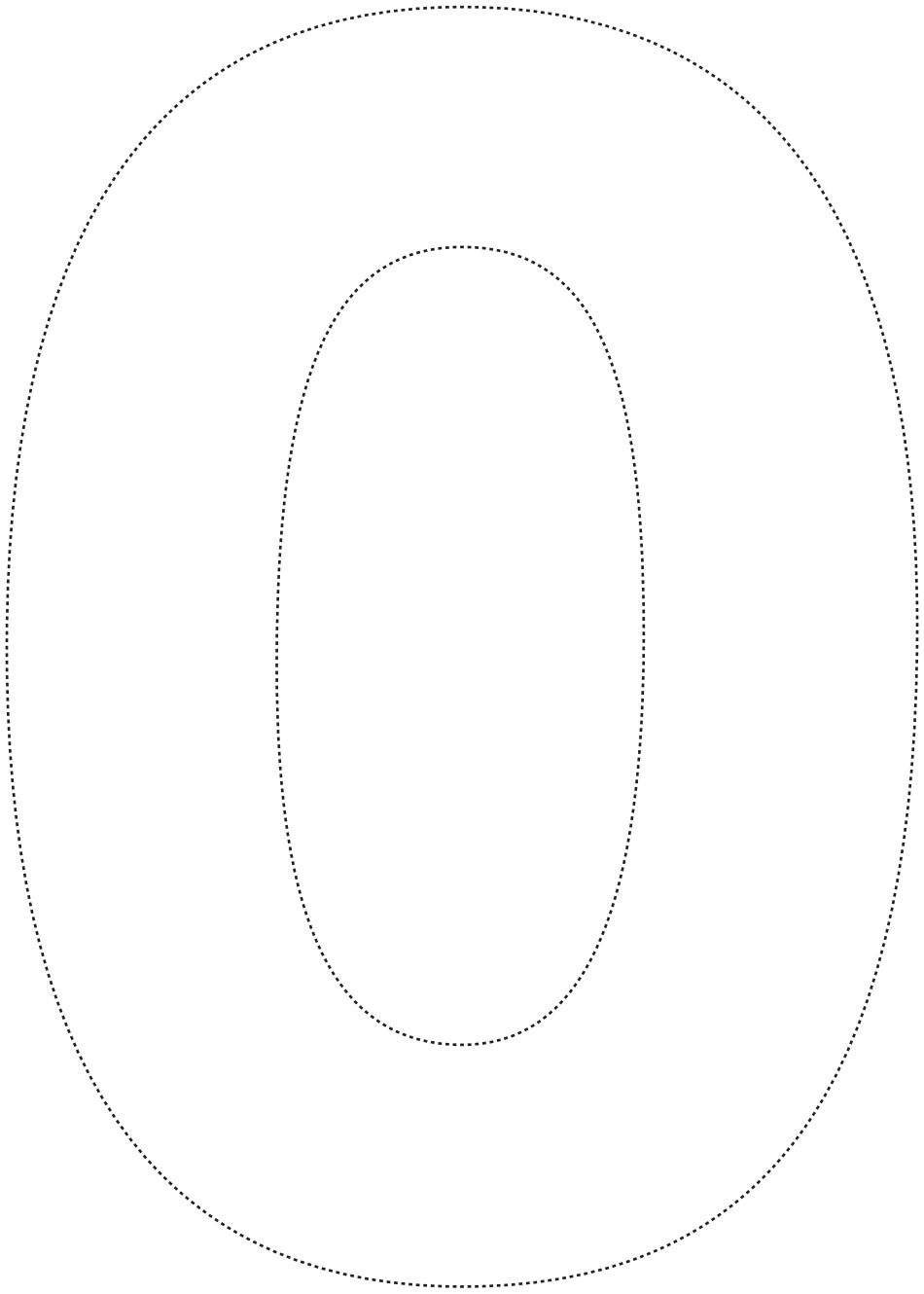
Year 2

Photocopiable Sheets (PCMs)









zero

1

one

2

two

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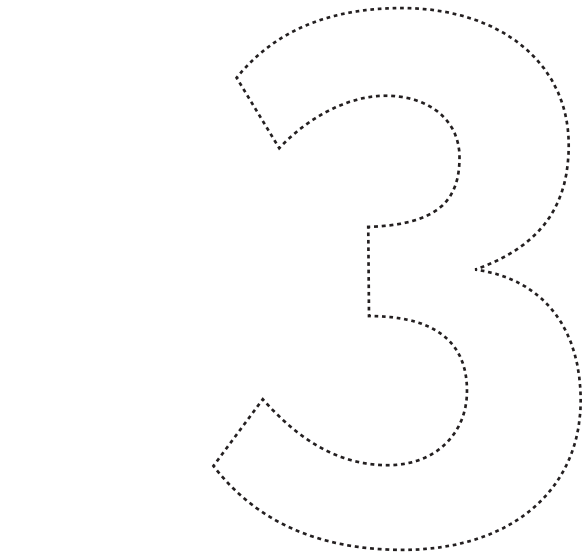
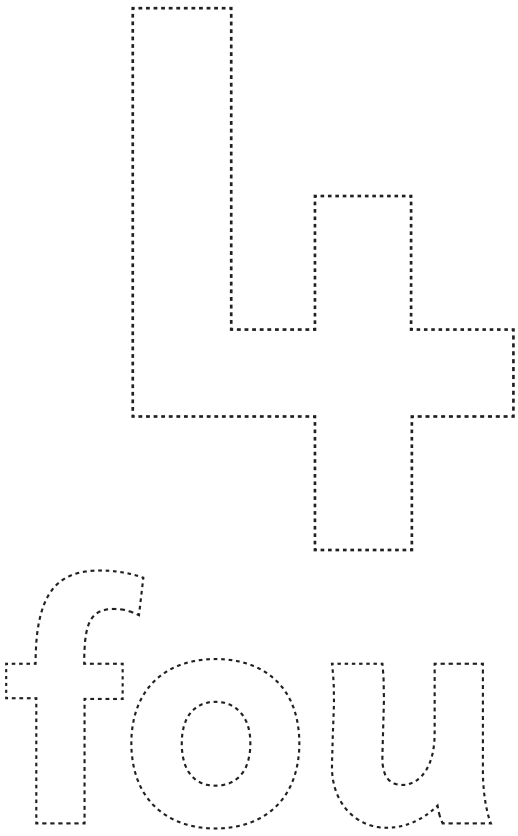
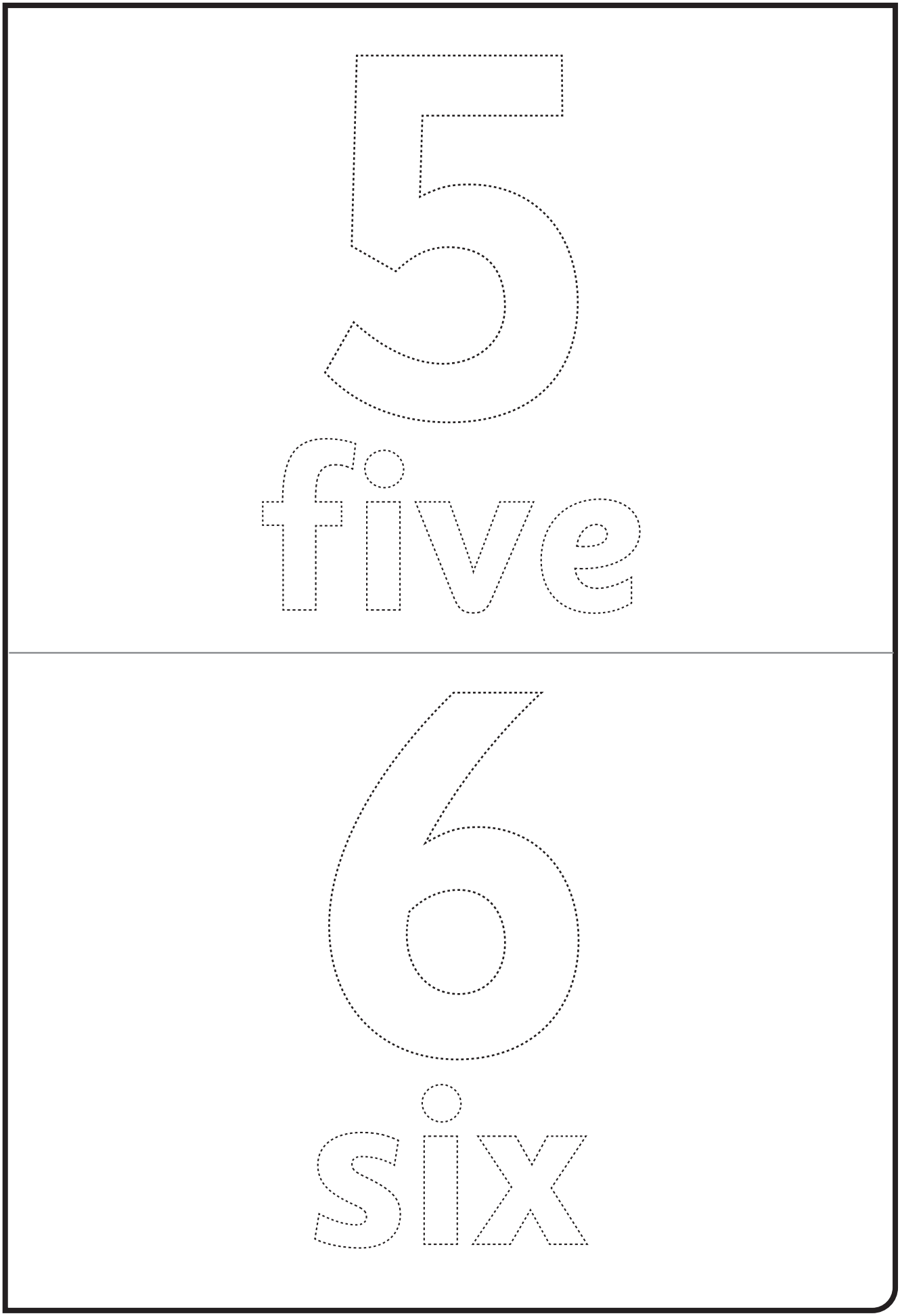


three



four

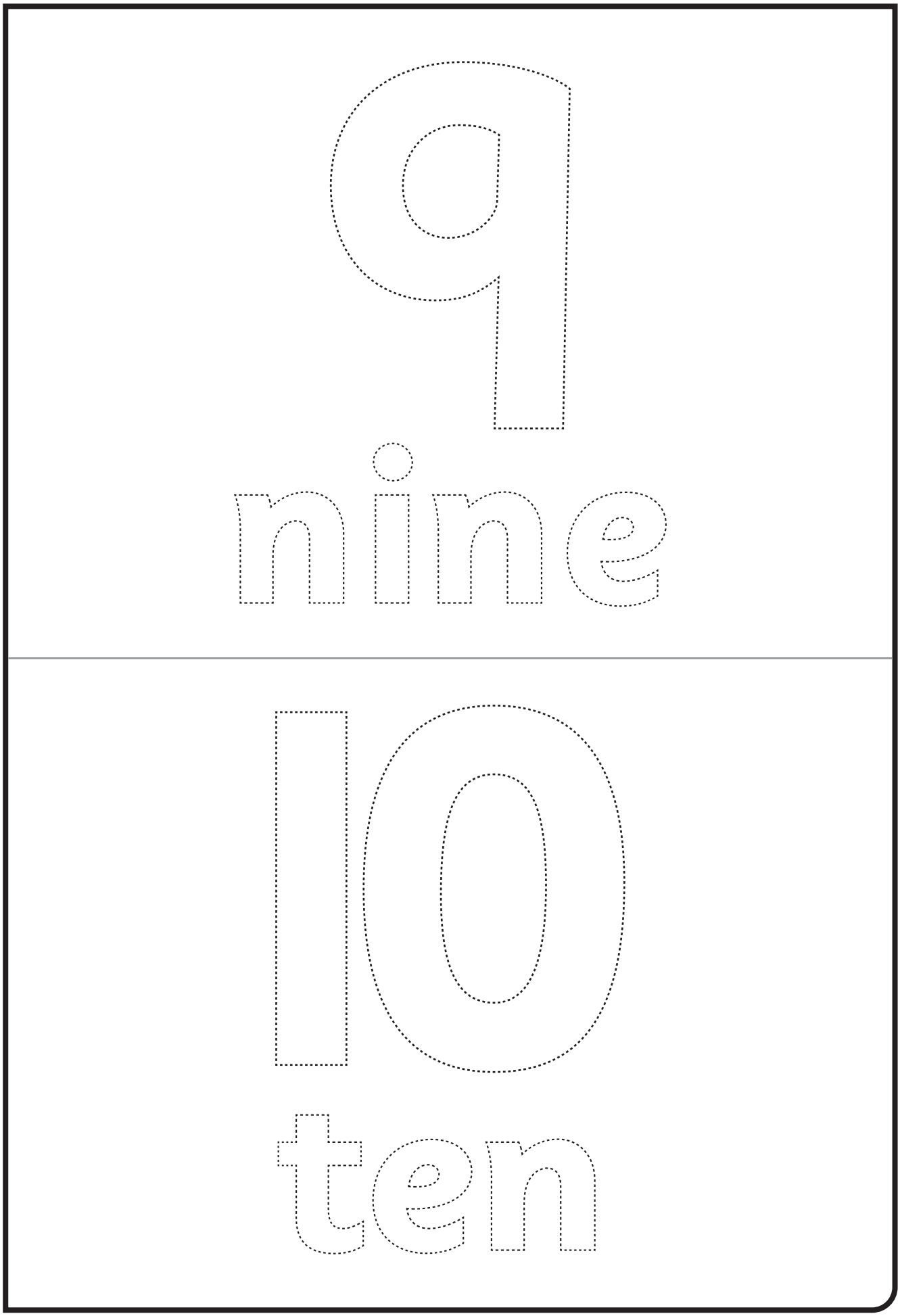

5
five
6
six

7

seven

8

eight



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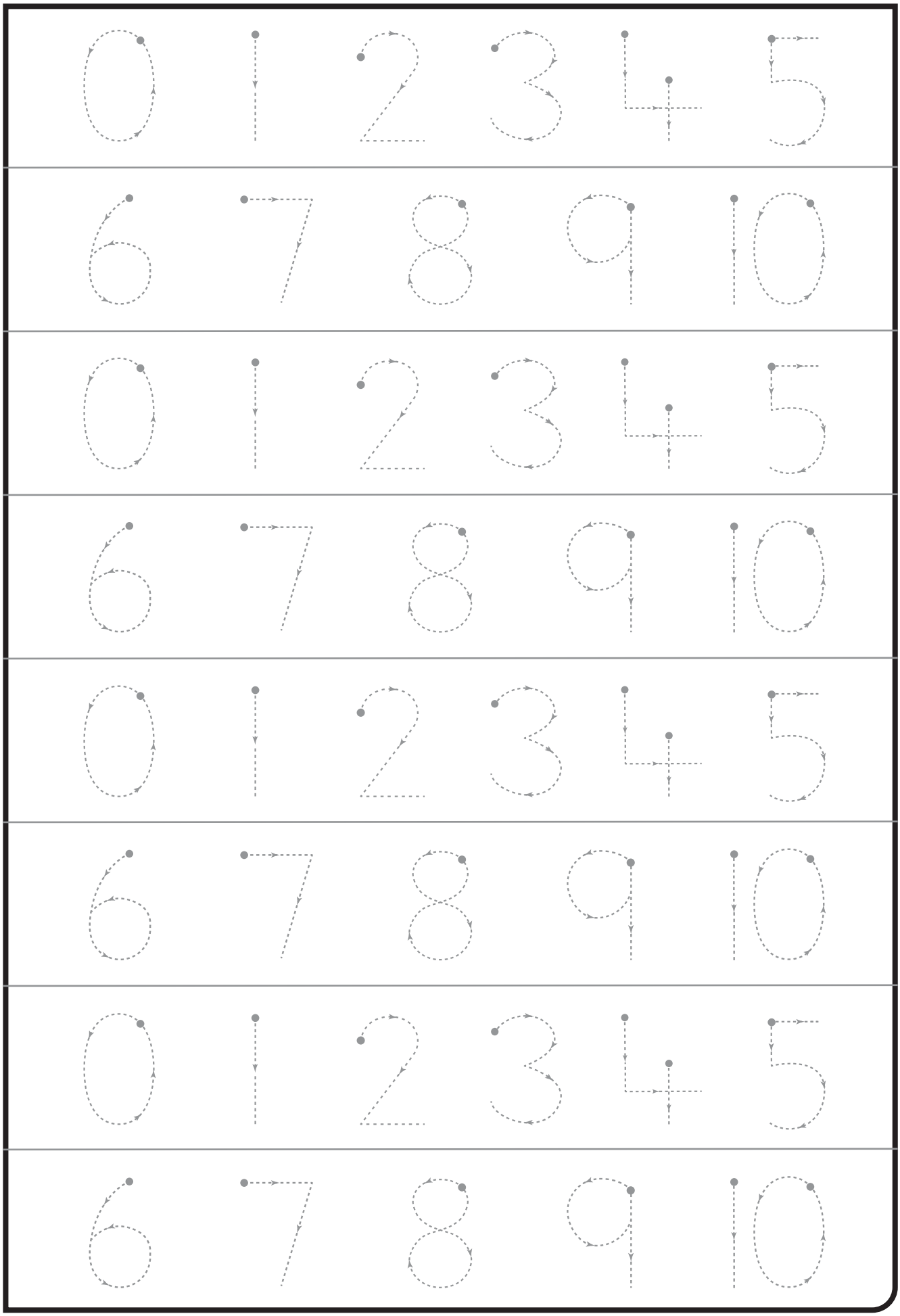

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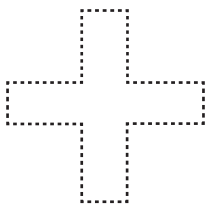
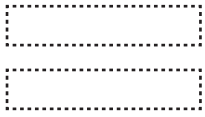
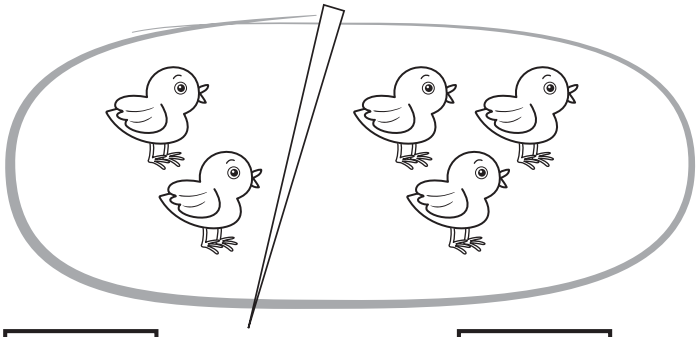
plus

equals



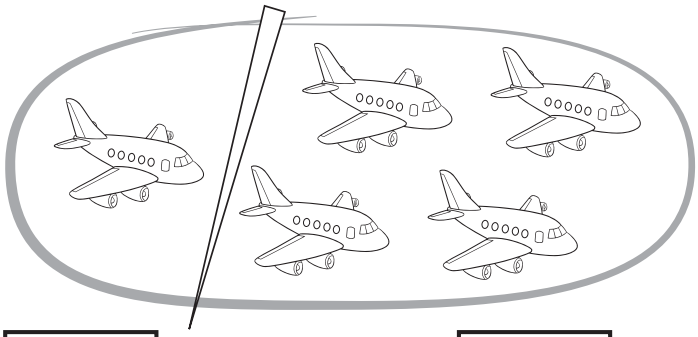


a



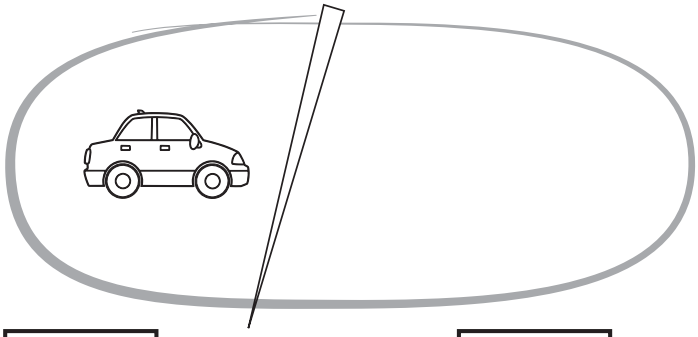
2 and 3 make ☐

b



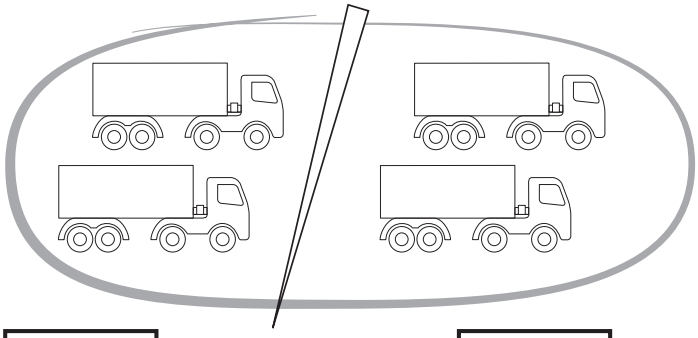
☐ and ☐ make ☐

c

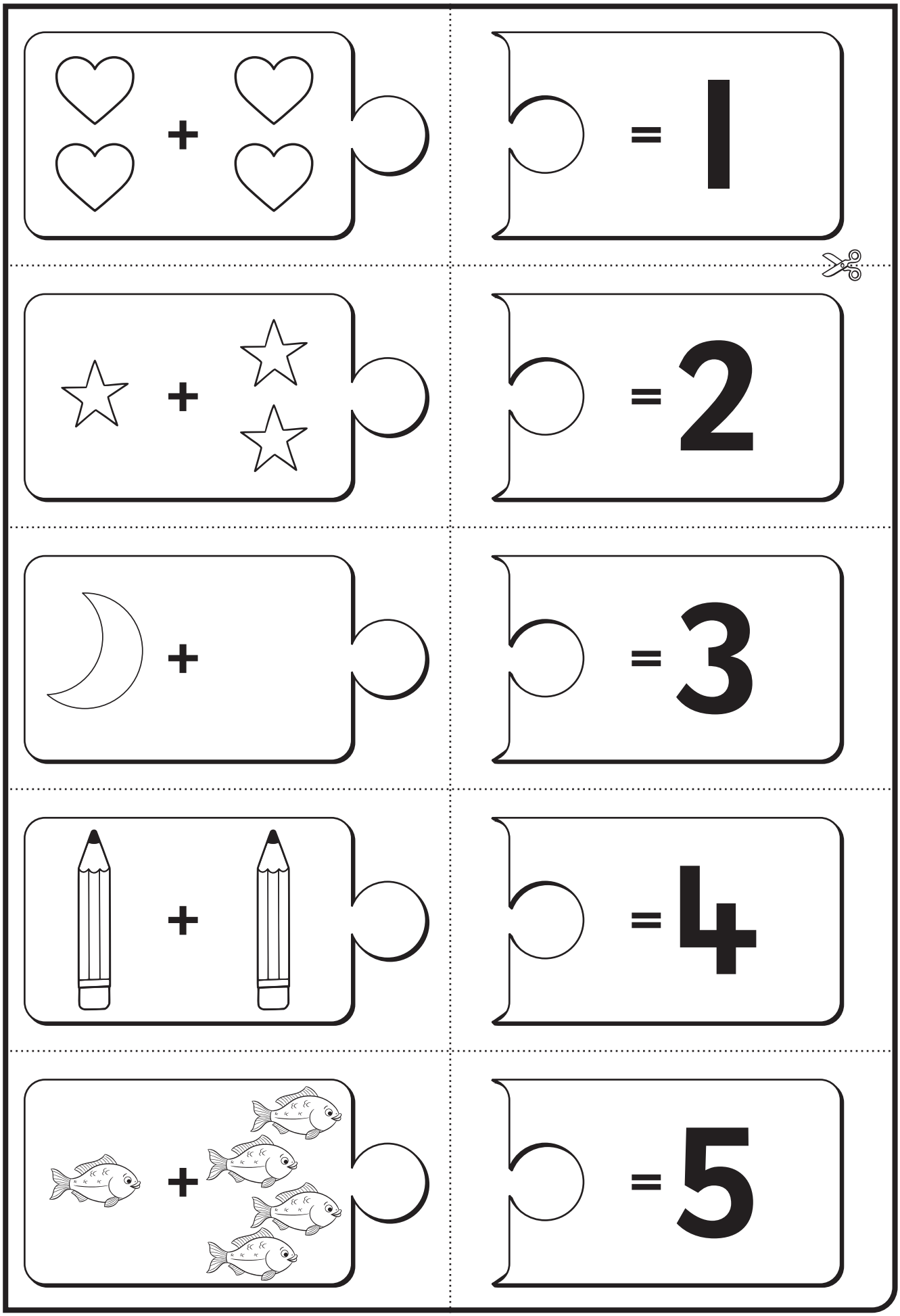


☐ and ☐ make ☐

d



☐ and ☐ make ☐



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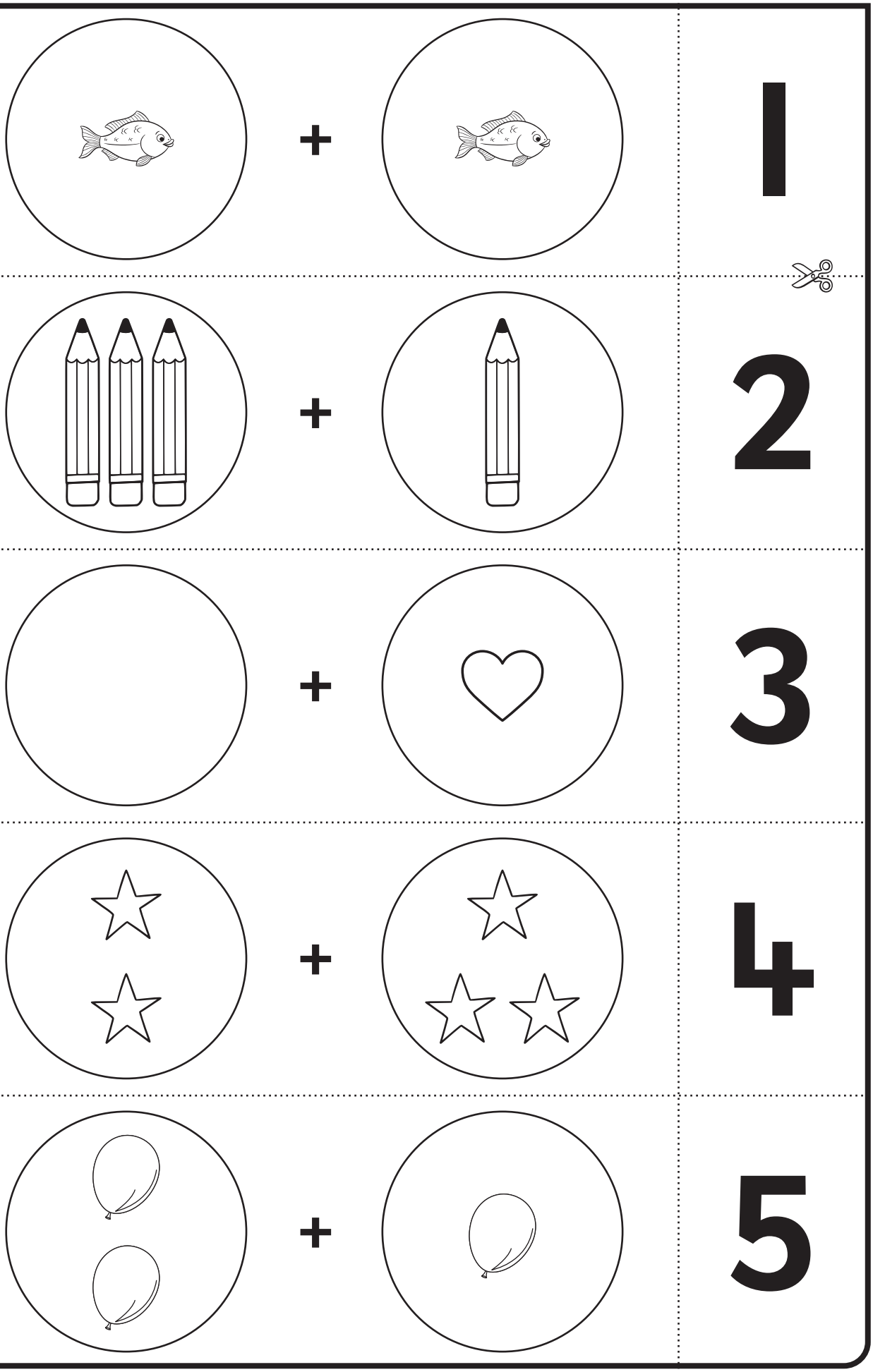
+
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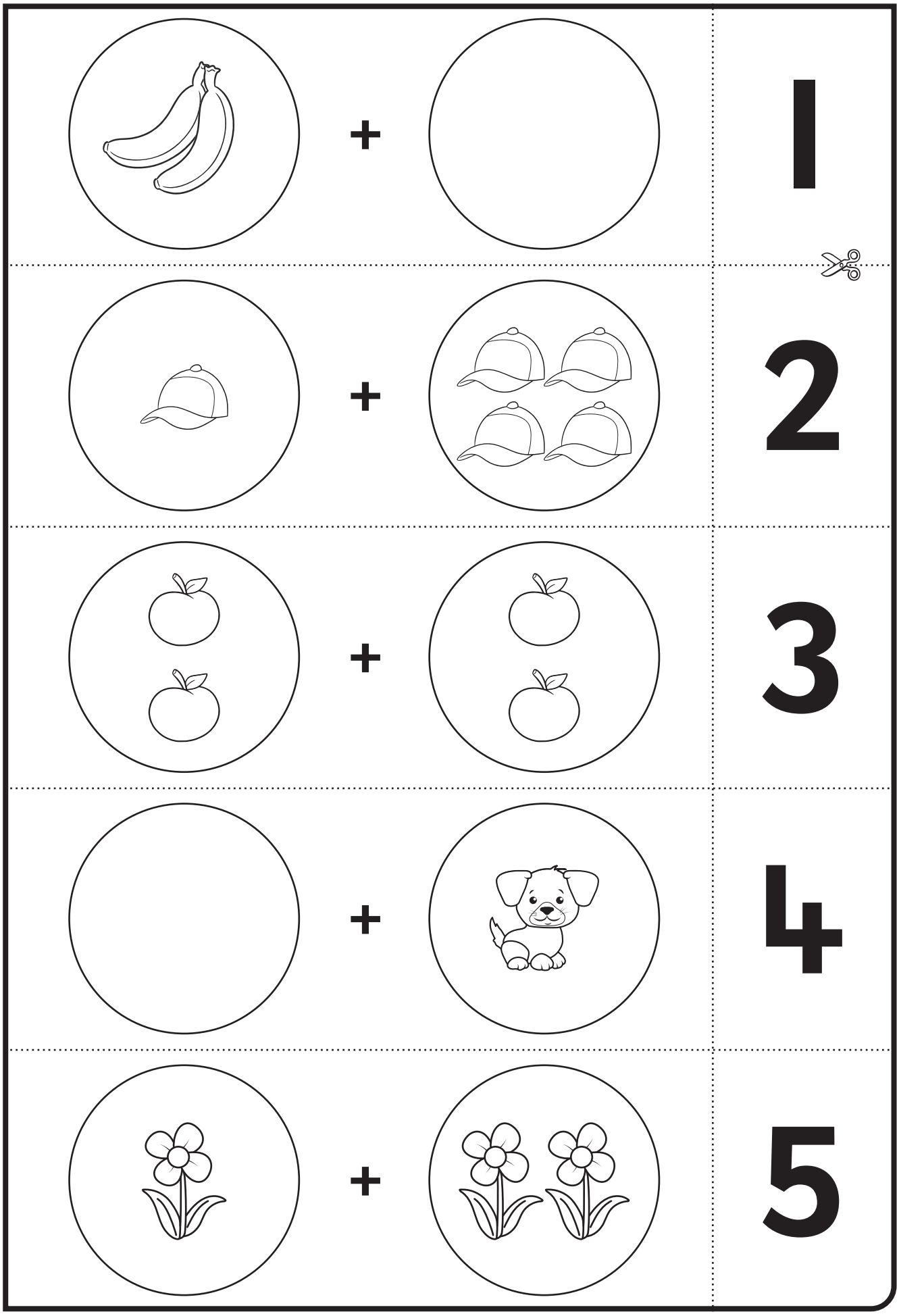
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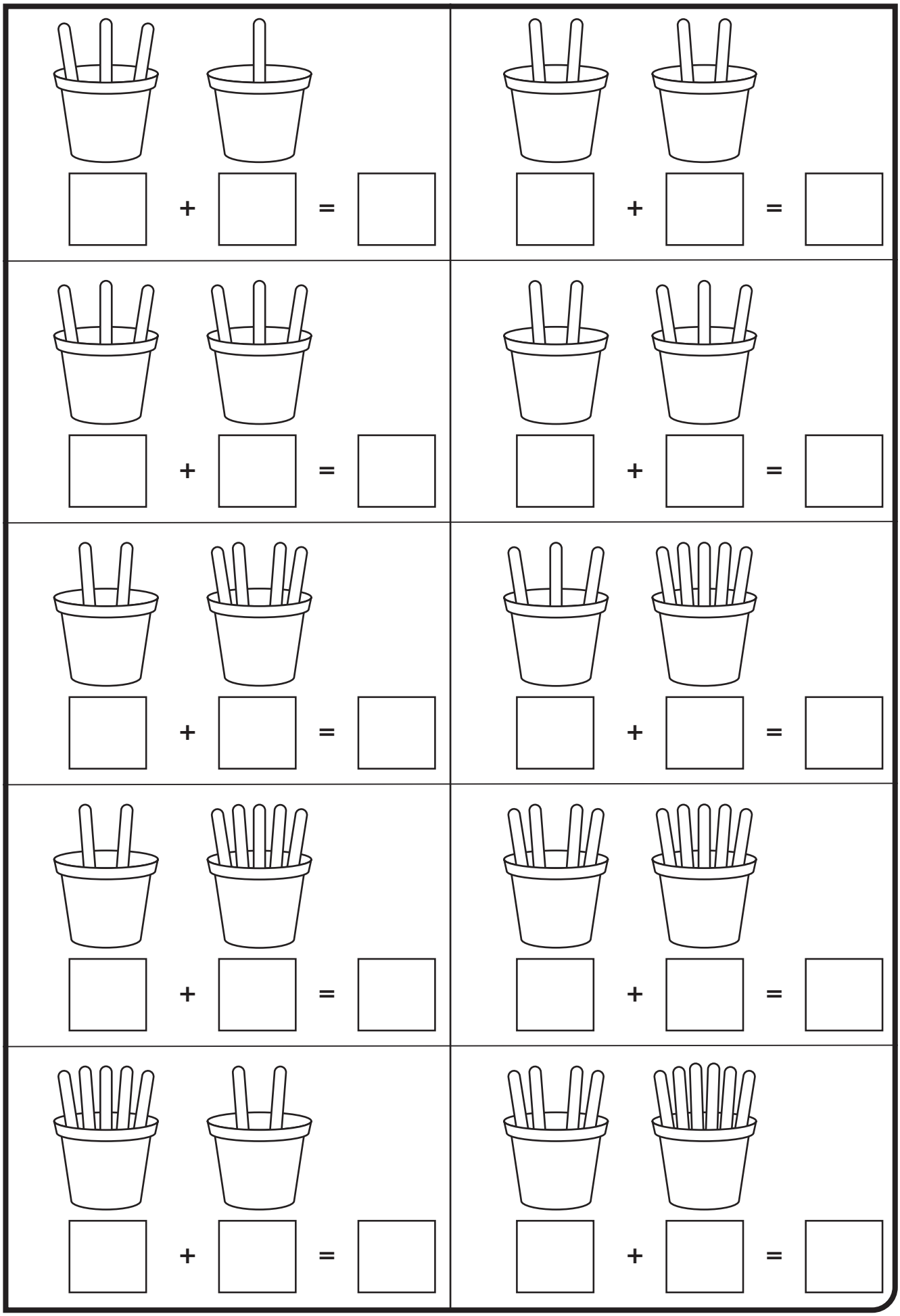

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5 + 5 = ☐	4 + 4 = ☐
4 + 3 = ☐	9 + 1 = ☐
8 + 2 = ☐	6 + 1 = ☐
1 + 7 = ☐	2 + 5 = ☐
4 + 2 = ☐	1 + 7 = ☐
3 + 6 = ☐	4 + 2 = ☐
6 + 4 = ☐	2 + 7 = ☐
4 + 5 = ☐	1 + 5 = ☐
0 + 9 = ☐	3 + 3 = ☐
7 + 3 = ☐	10 + 0 = ☐

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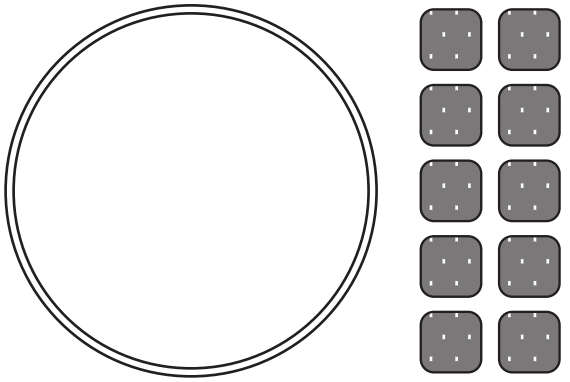
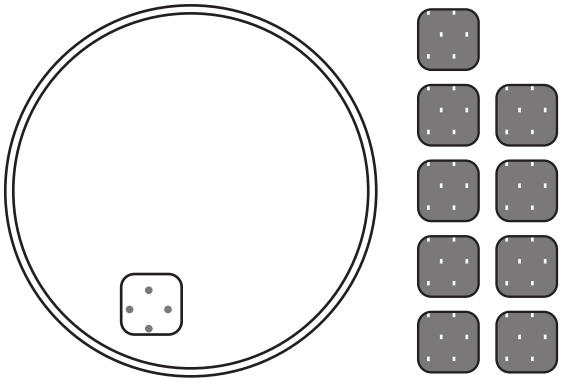
Place a tick under the number sentence each time your group makes it!
Have fun!

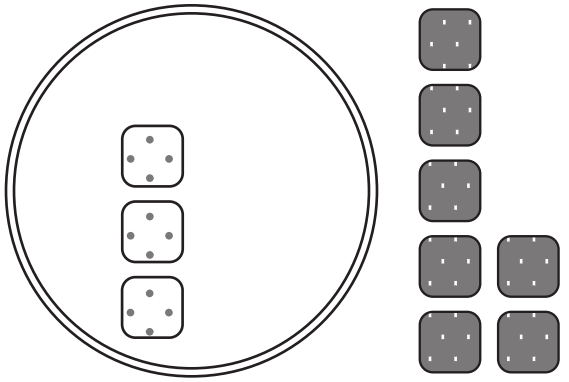
10 = 0 + 10



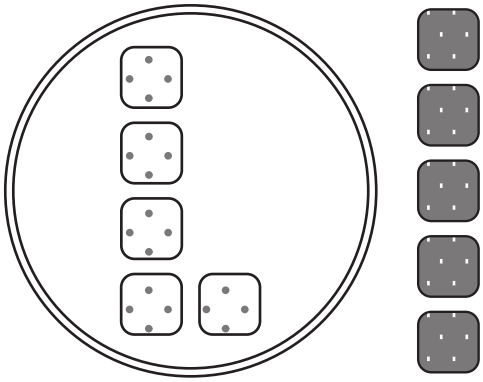
10 = 1 + 9



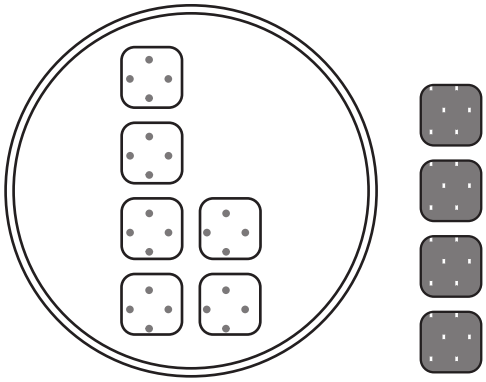
10 = 3 + 7



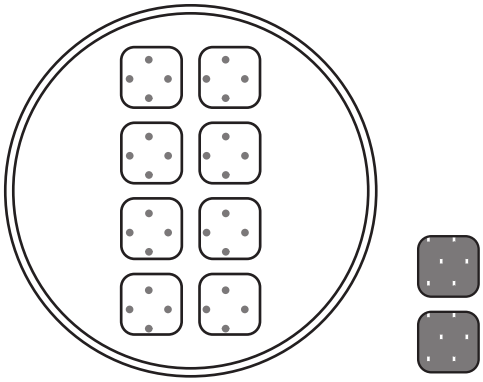
10 = 5 + 5



10 = 6 + 4



10 = 8 + 2



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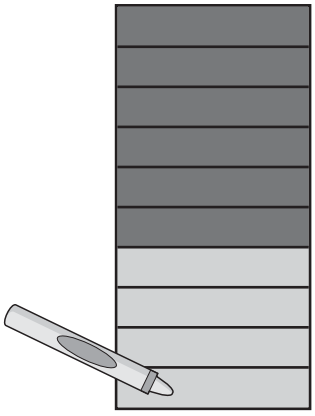
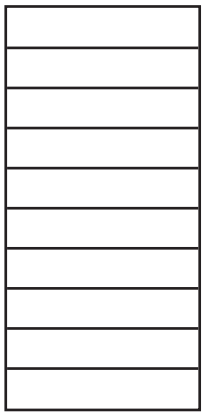
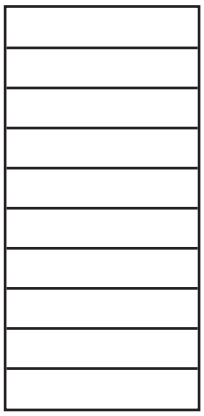
Colour to show different ways of building your Lego tower using two different coloured bricks. Look at the example.



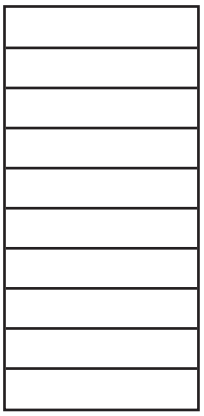
10 = 4 + 6



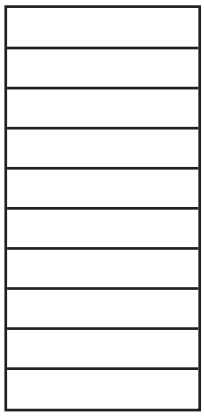
10 = ☐ + ☐



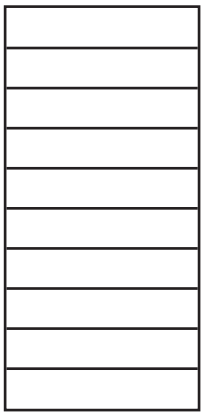
10 = ☐ + ☐



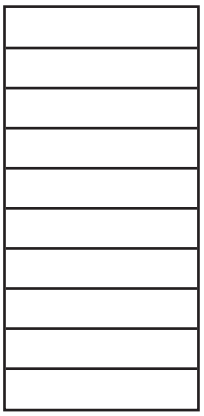
10 = ☐ + ☐



10 = ☐ + ☐



10 = ☐ + ☐



10 = ☐ + ☐

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10 = 1 + 9



10 = 2 + 8



10 = 3 + 7



10 = 4 + 6



10 = 5 + 5



10 = 6 + 4



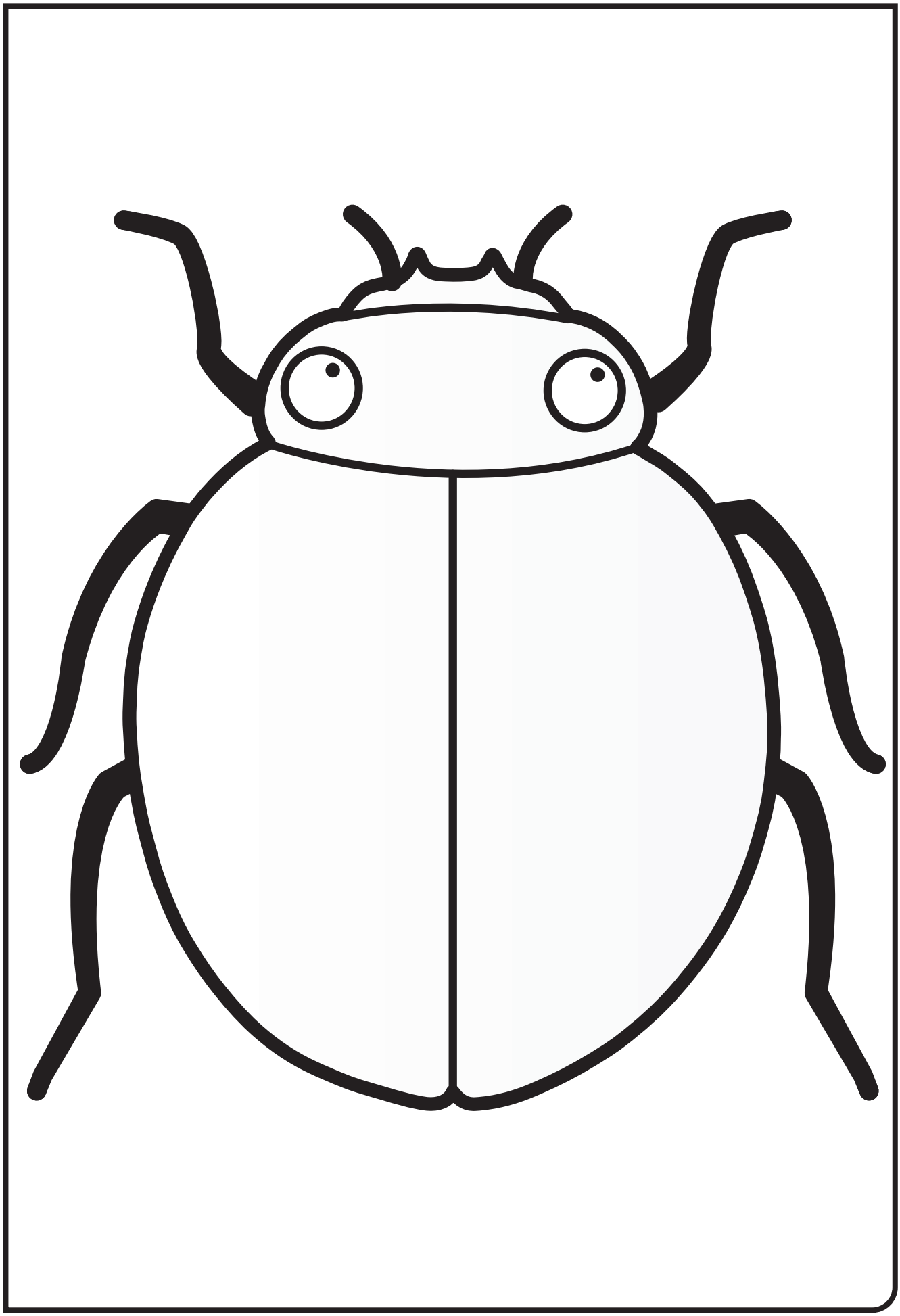
10 = 7 + 3

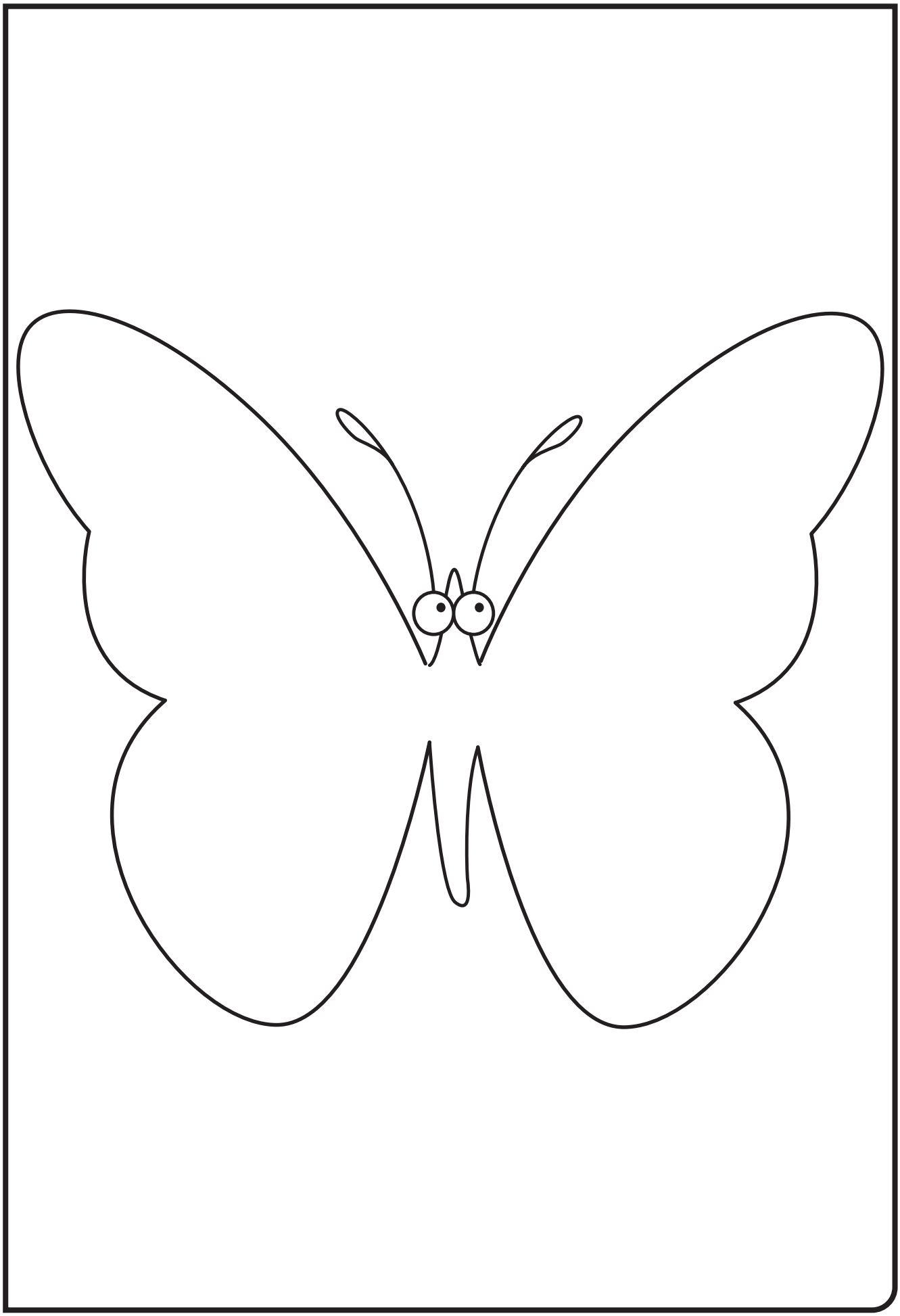


10 = 8 + 2

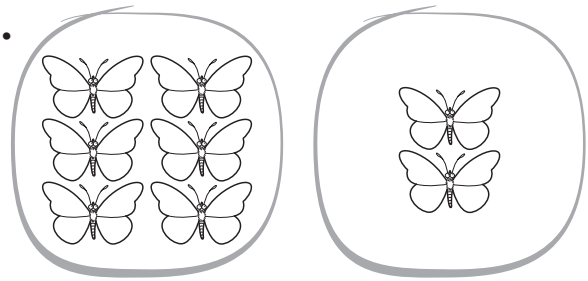


10 = 9 + 1



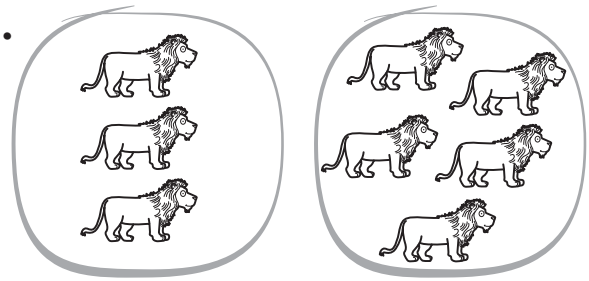


1.



□ = □ + □

2.



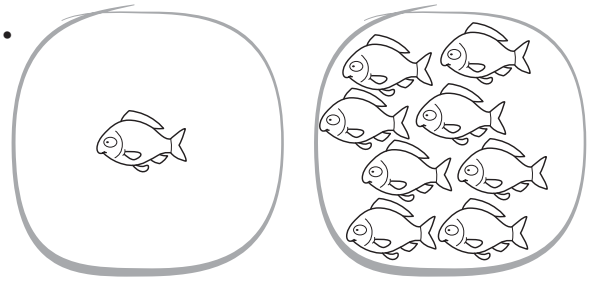
□ = □ + □

3.



□ = □ + □

4.



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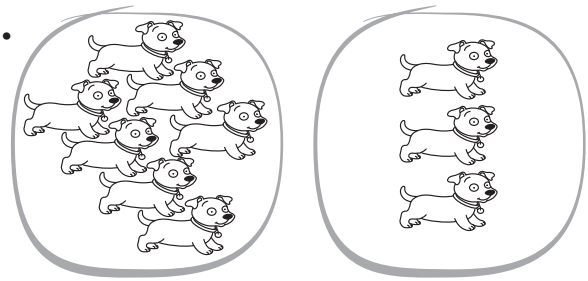

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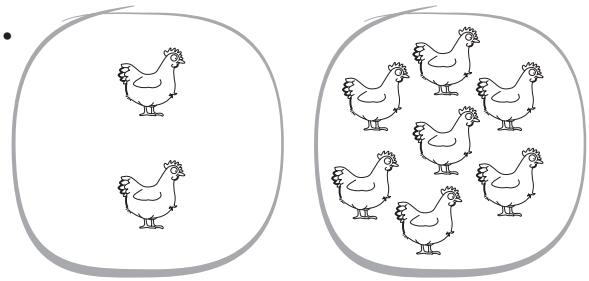

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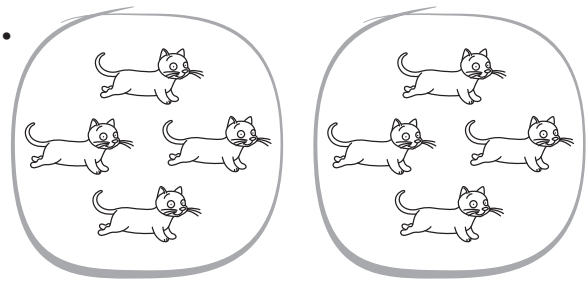

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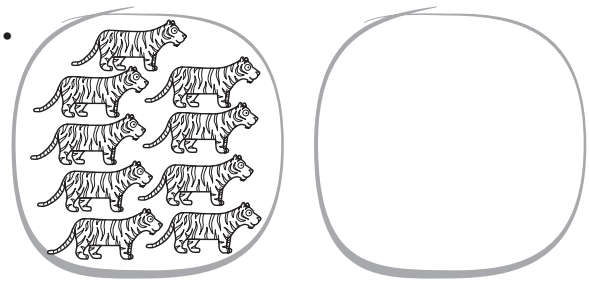

□ = □ + □

	2	3		5	6		8		10	11		13		

1			4			7		9	10		12		14	15

1		3		5	6		8		10	11		13		

1	2		4				8	9			12	13		15

		3	4	5	6	7			10	11			14	

1	2			5		7		9		11		13		15

	2		4		6		8		10		12		14	

1		3		5		7		9		11		13		15

	14		12		10		8		6		4		2	1

15		13		11		9		7		5		3	2	

			12			9	8		6		4	3	2	1

15				11			8		6	5	4		2	1

	14	13	12			9		7		5	4	3		

		13		11			8		6	5	4	3	2	1

15		13		11		9		7		5		3		1

	14		12		10		8		6		4		2	1

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20

1. Put your counter on the number that comes before ☐.

2. Put your counter on the number that comes after ☐.

3. Put your counter on the number that comes between ☐ and ☐.

4. ☐ comes just before what number?

5. ☐ comes just after what number?

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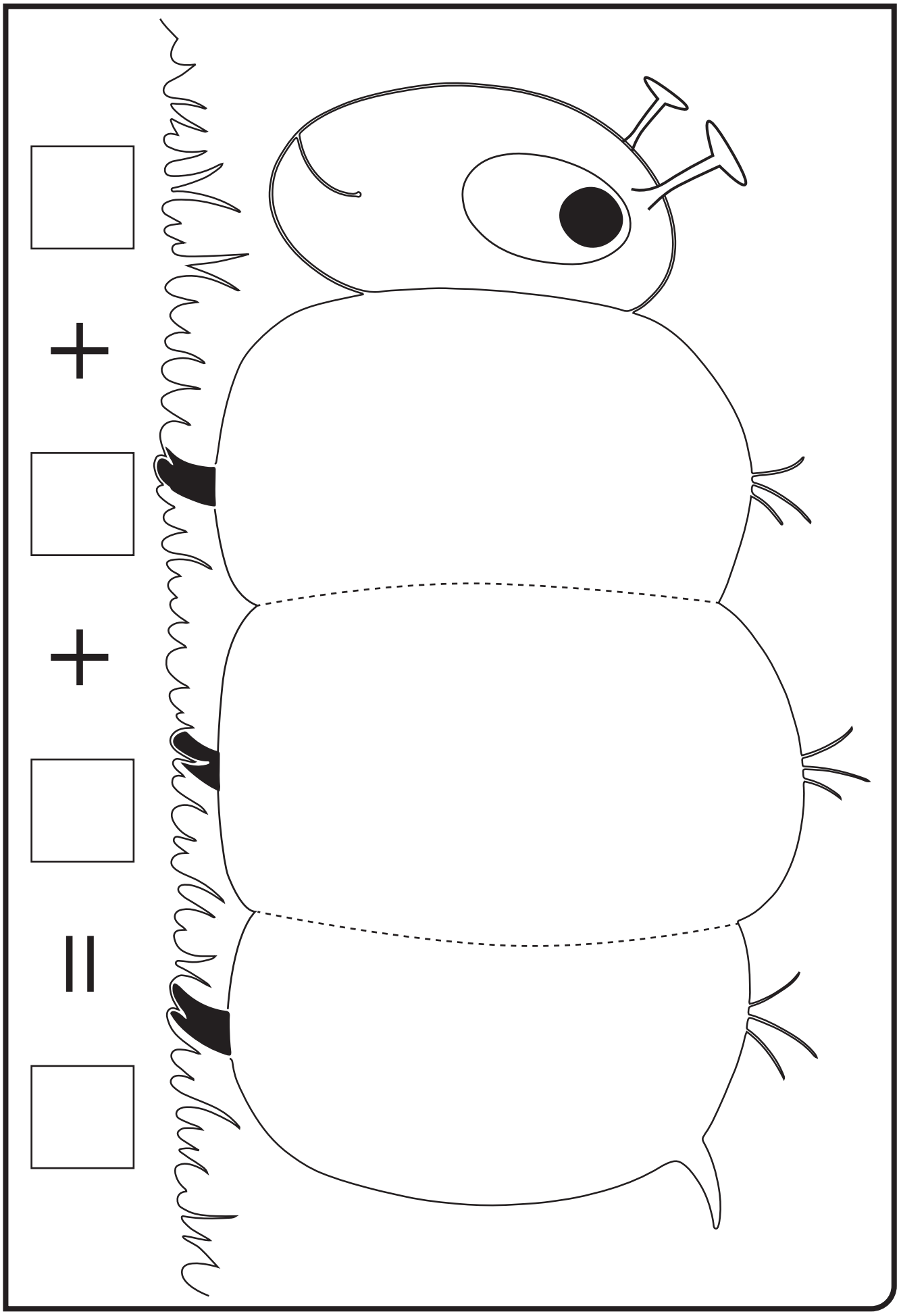
1	2	2
3	3	3
4	4	4
5	5	6
6	7	8



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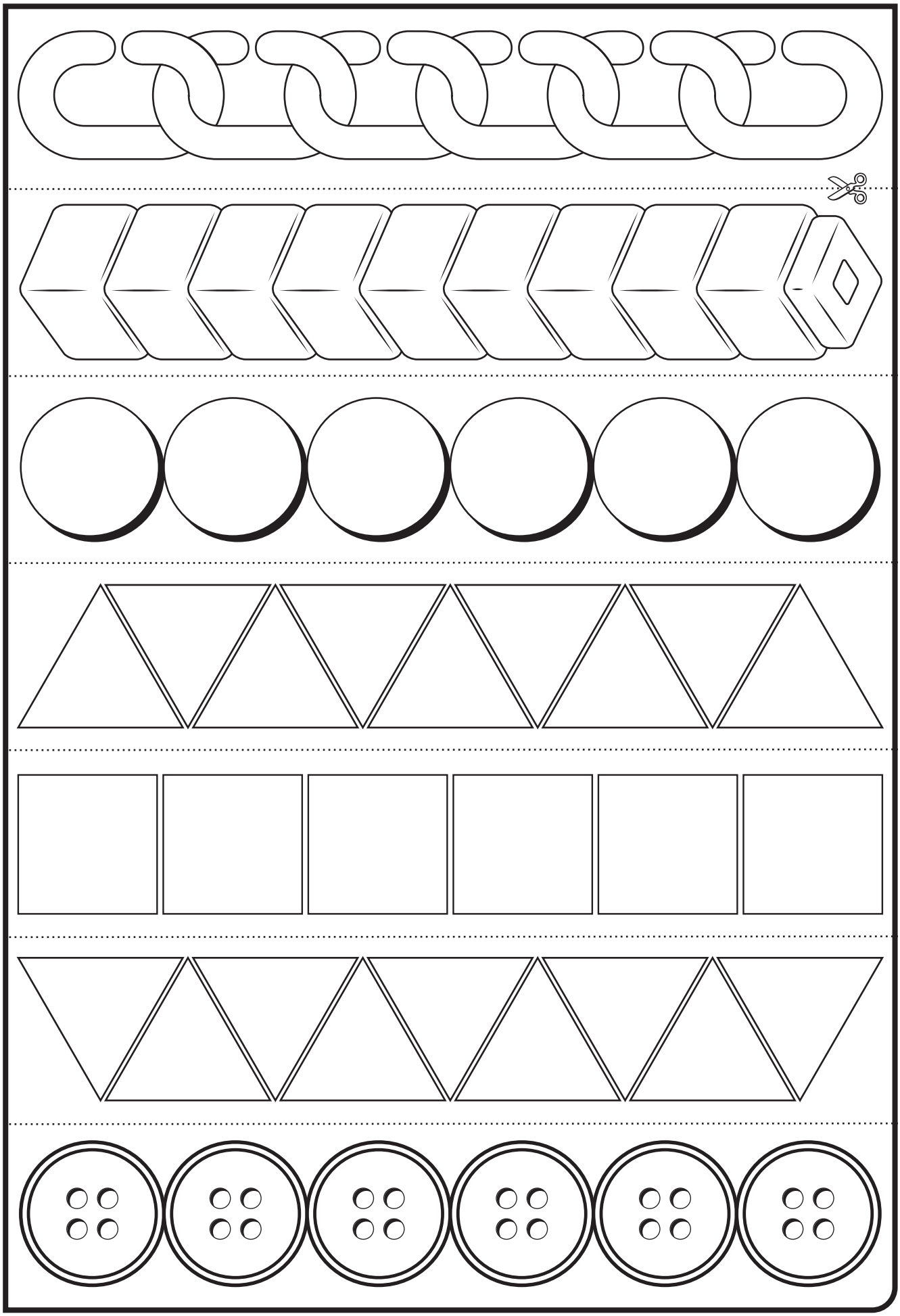
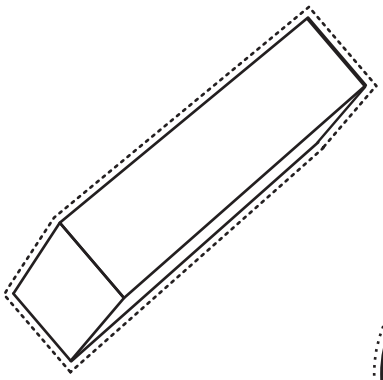
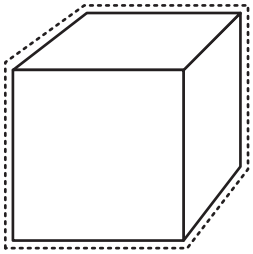
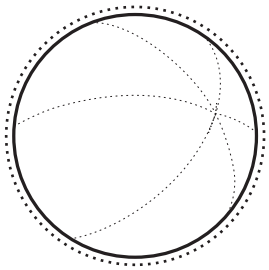
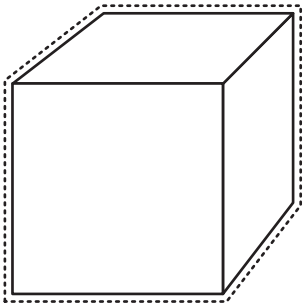
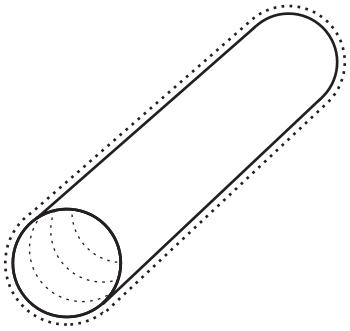
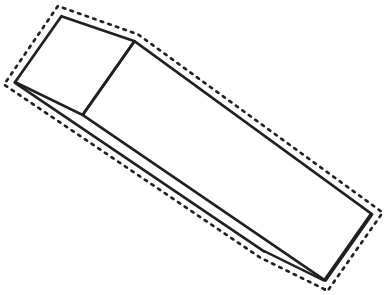
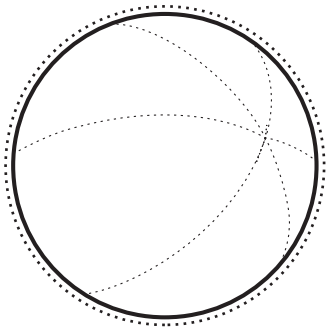
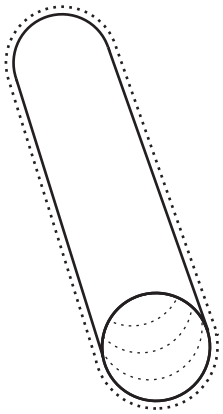
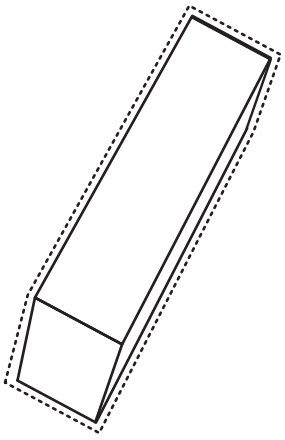


CJ Fallon NORTHERN IRELAND

first

second

third

last



FIRST



SECOND



THIRD



LAST

CJ Fallon NORTHERN IRELAND

What is my name?

My last letter is **k**.

My 1st letter is **M**.

My 3rd letter is **r**.

My 2nd letter is **a**.

What is my name?

My 4th letter is **y**.

My 2nd letter is **i**.

My 3rd letter is **l**.

My 1st letter is **L**.

What is my name?

My first letter is **R**.

My 2nd letter is **o**.

My last letter is **e**.

My 3rd letter is **s**.

What is my name?

My 2nd letter is **d**.

My 3rd letter is **a**.

My 4th letter is **m**.

My first letter is **A**.

What is my name?

My 3rd letter is **k**.

My second letter is **u**.

My 1st letter is **L**.

My last letter is **e**.

What is my name?

My 2nd letter is **o**.

My 3rd letter is **a**.

My 4th letter is **h**.

My first letter is **N**.

What is my name?

My first letter is **E**.

My 2nd letter is **m**.

My last letter is **a**.

My 3rd letter is **m**.

What is my name?

My 4th letter is **a**.

My 2nd letter is **r**.

My third letter is **l**.

My 1st letter is **O**.

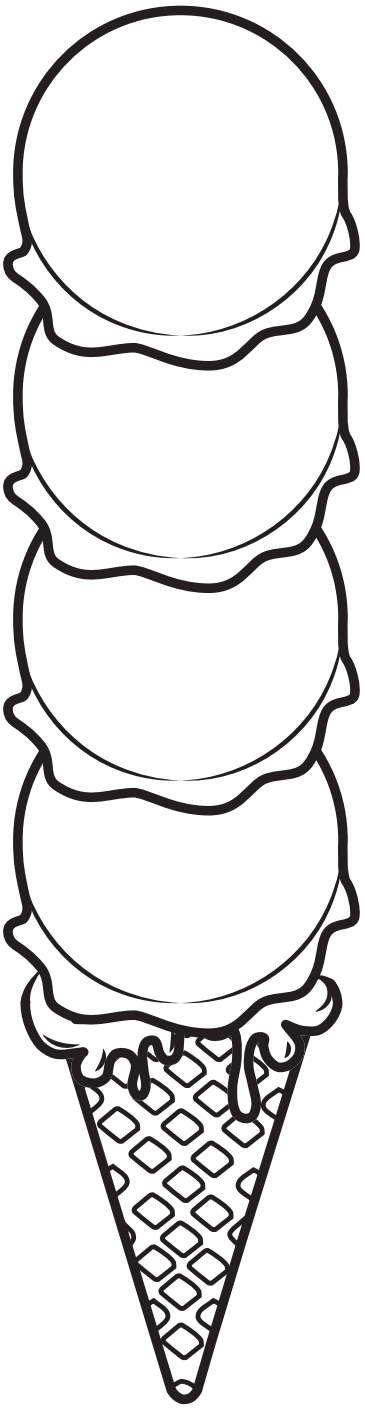
What is my name?

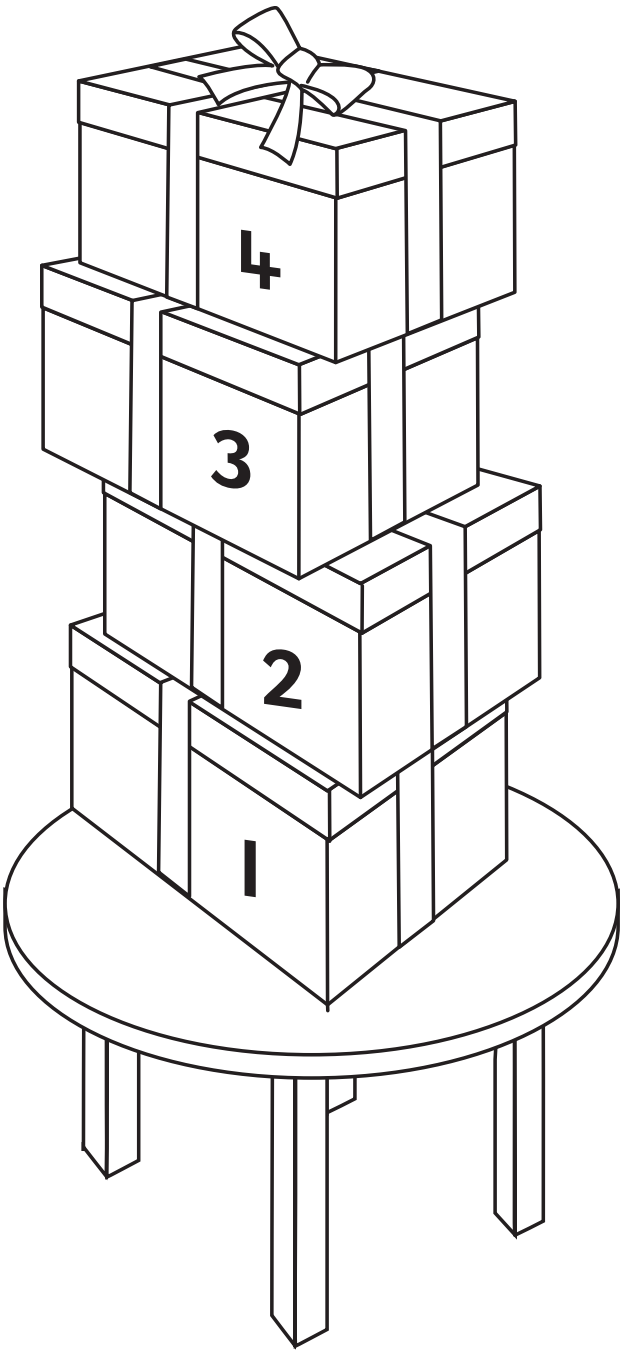
My last letter is **n**.

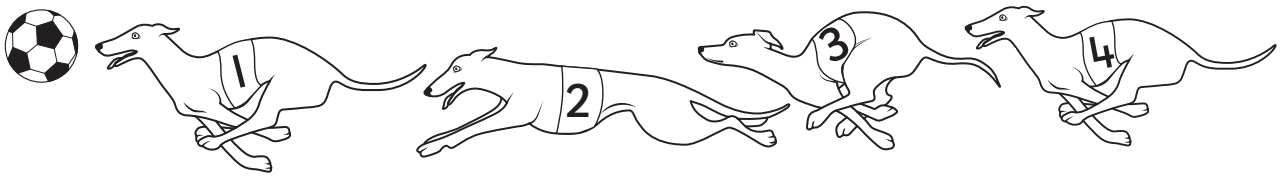
My 1st letter is **C**.

My 3rd letter is **a**.

My 2nd letter is **i**.







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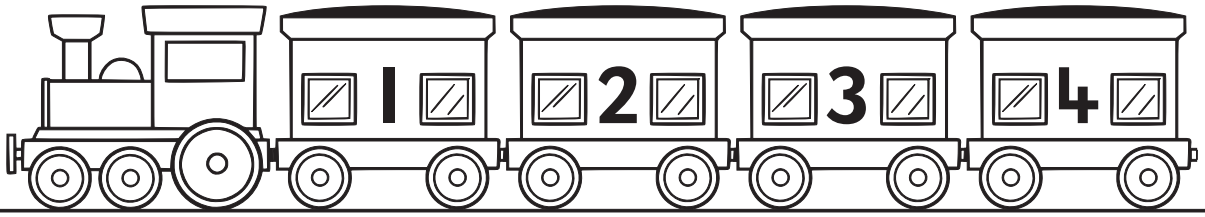
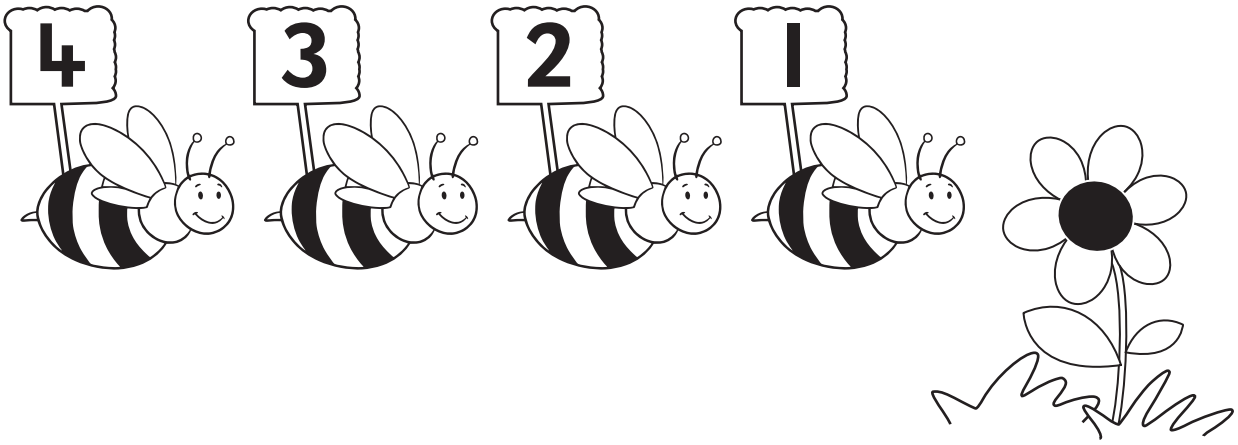

1
2
3
4


4
3
2
1


1
2
3
4

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday

Weekend

My Busy Week	Monday
Tuesday	Wednesday
Thursday	Friday
Saturday	Sunday

CJ Fallon NORTHERN IRELAND



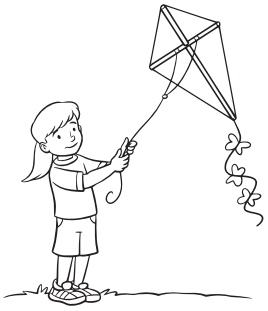


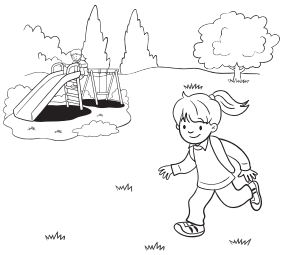










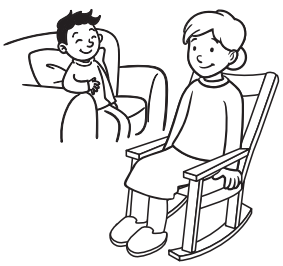


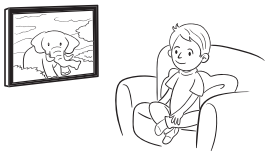
















CJFallon NORTHERN IRELAND

January

February

March

April

CJFallon NORTHERN IRELAND

May

June

July

August

CJFallon NORTHERN IRELAND

September

October

November

December

CJFallon NORTHERN IRELAND

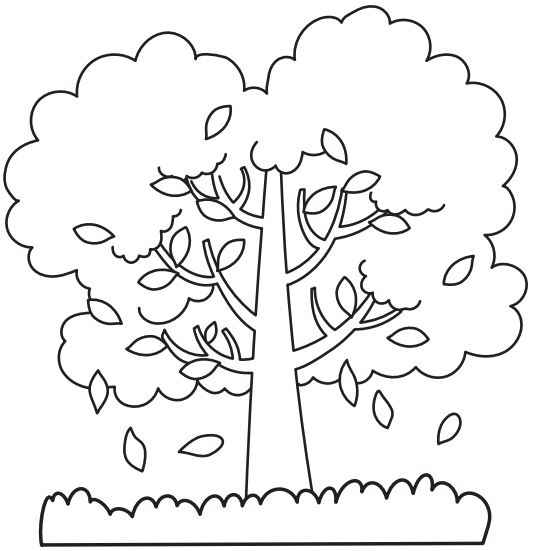
spring

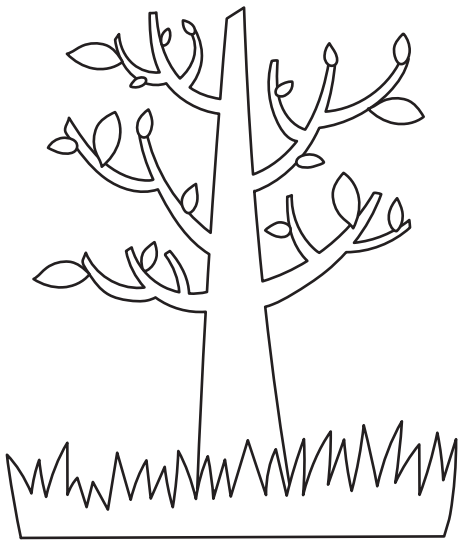
summer

autumn

winter

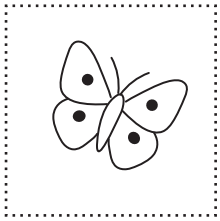
Note to teacher: Photocopy PCM x2



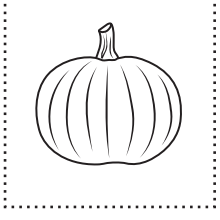


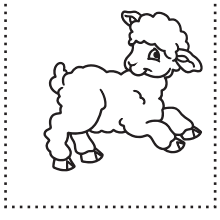






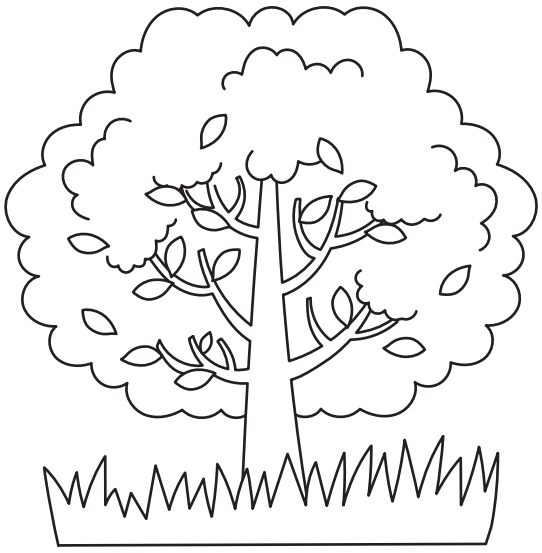


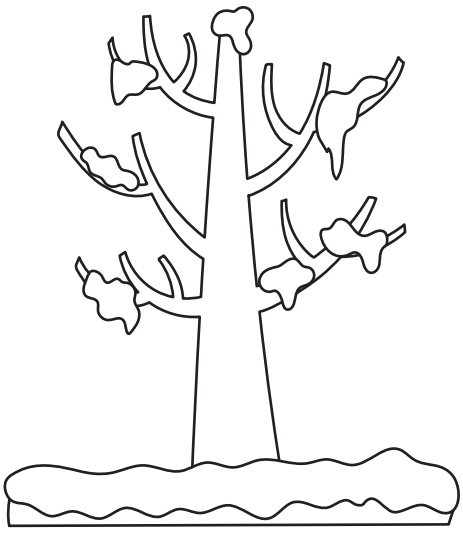




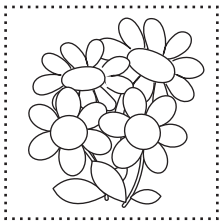




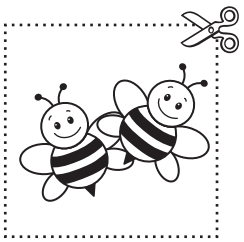


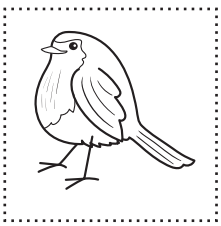


















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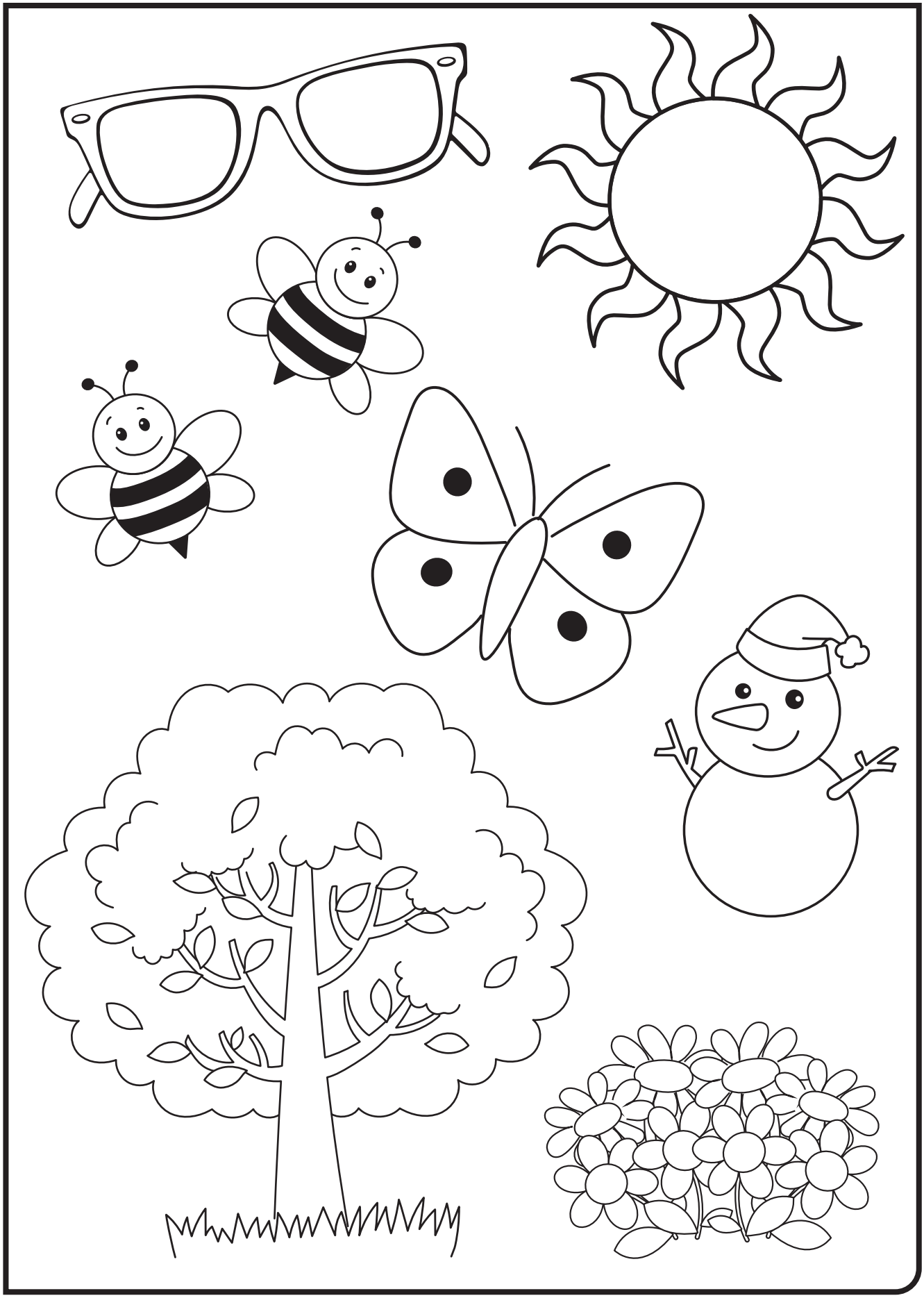
Summer



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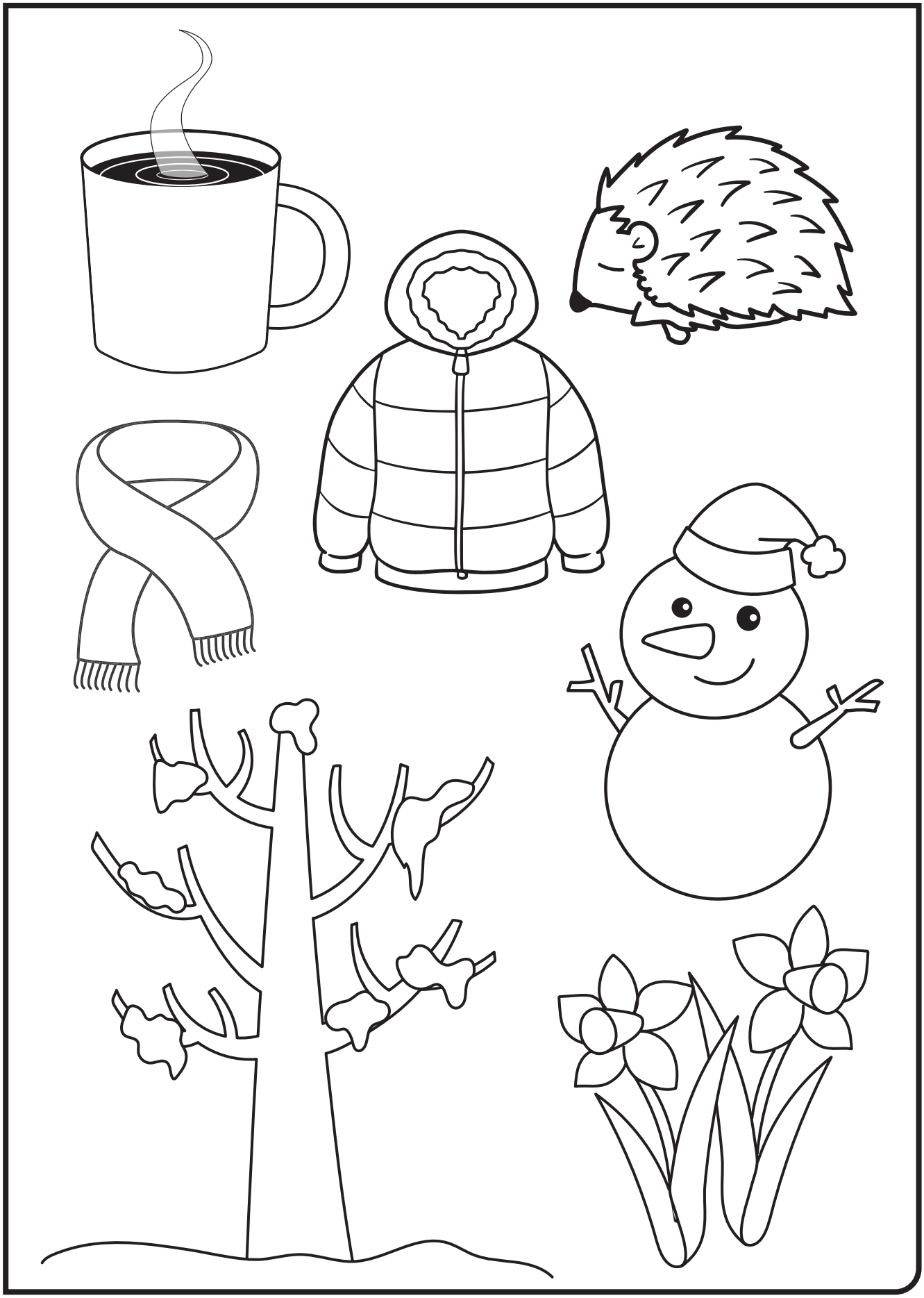
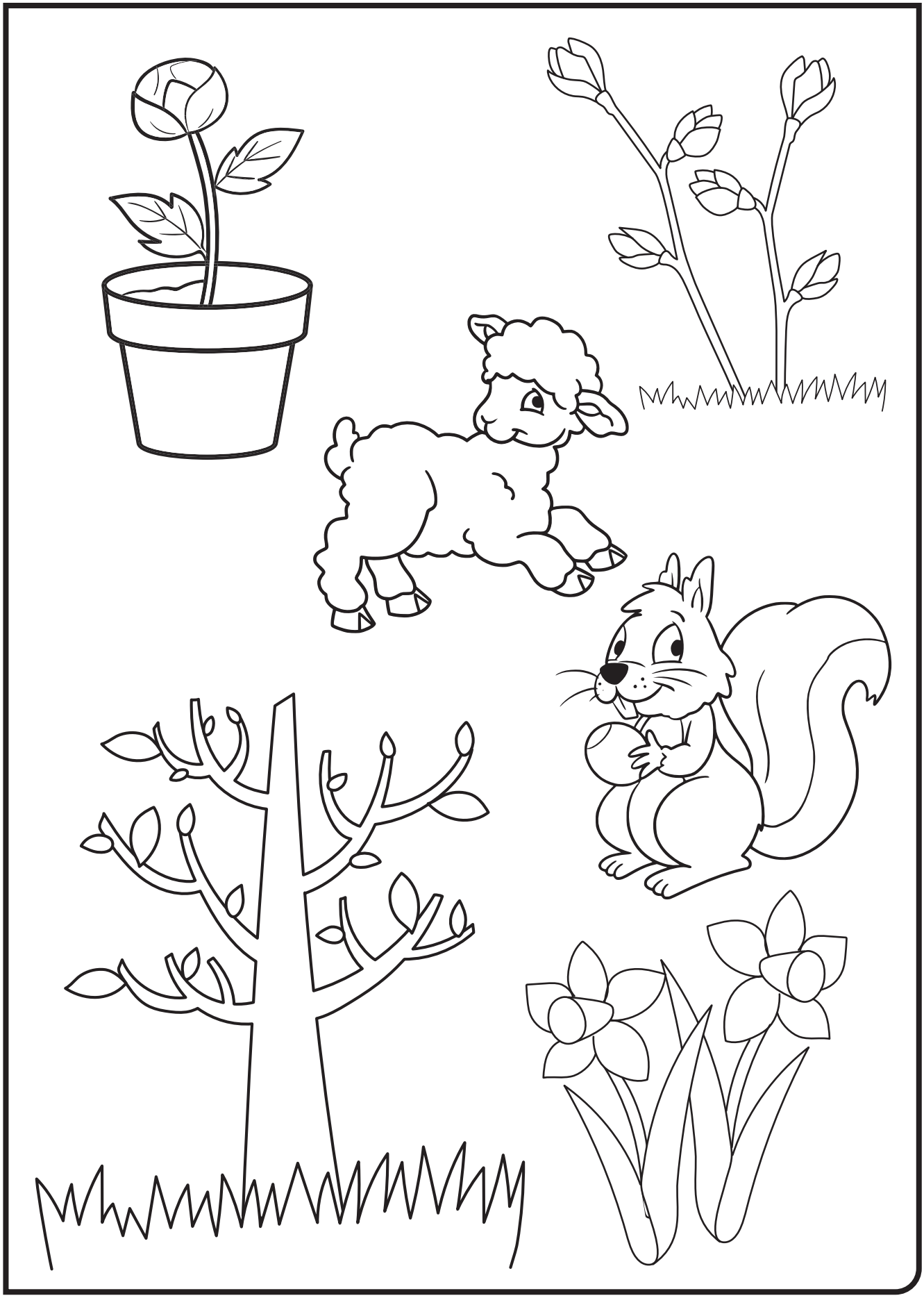
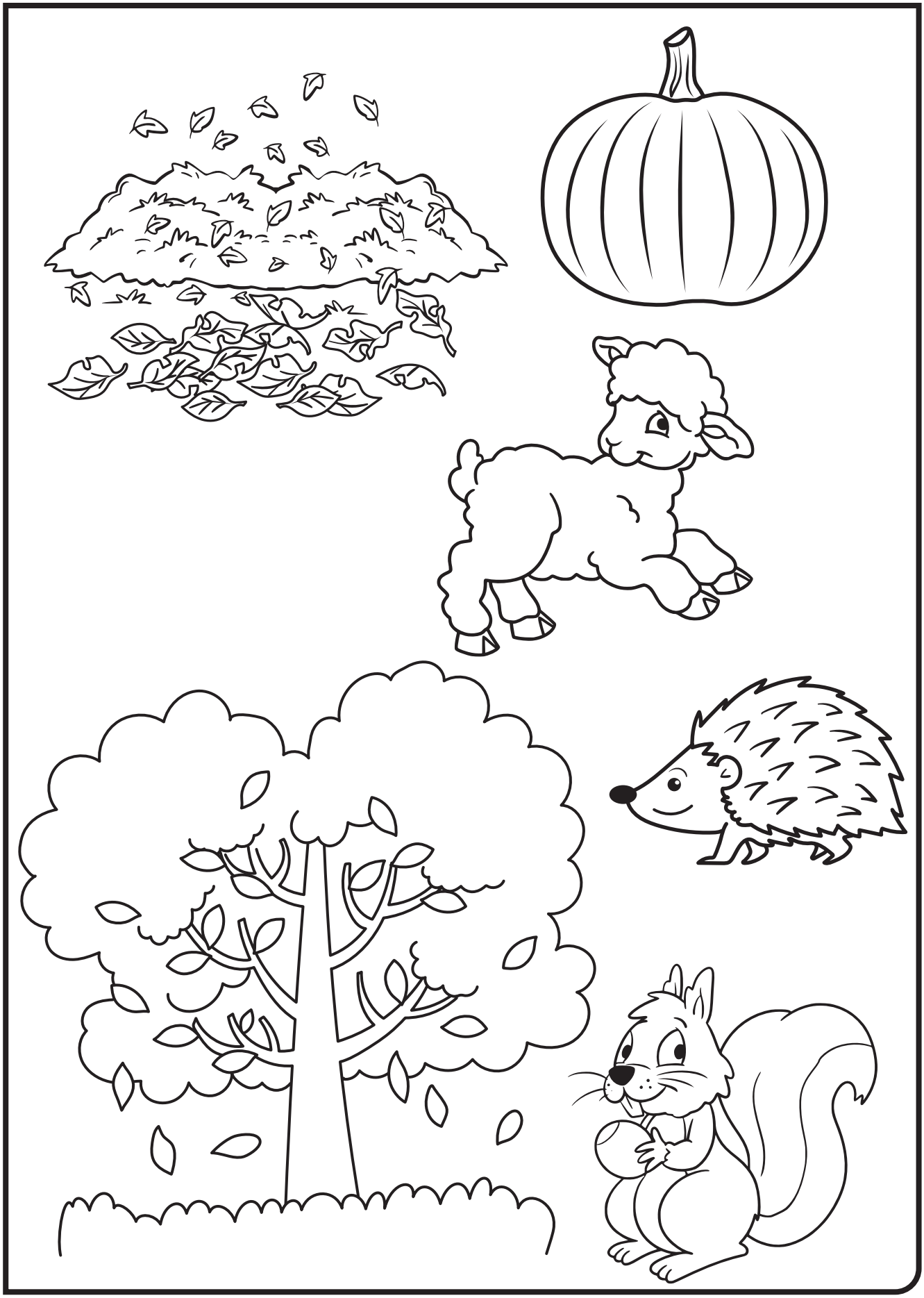
Winter



Spring



Autumn



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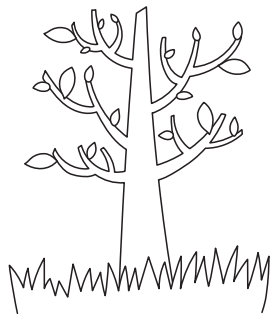
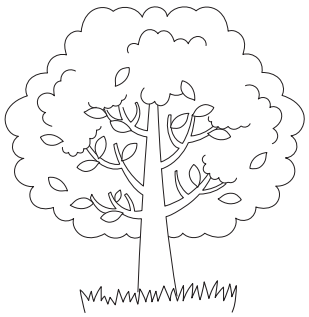
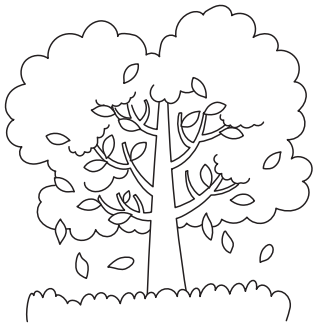
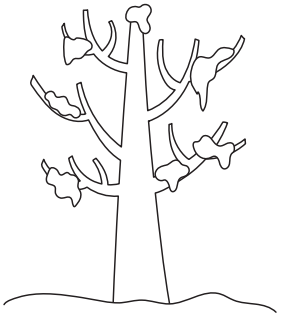
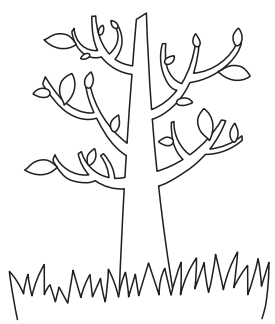
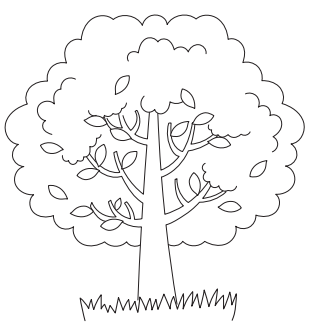
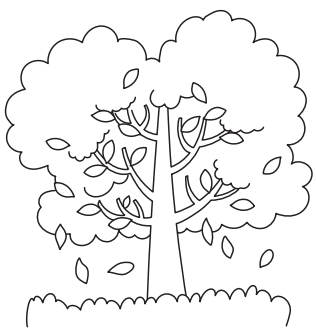
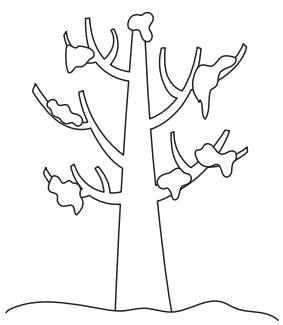
Put the season trees in order. Start with spring.

1	2	3	4
			

1	2	3	4
			

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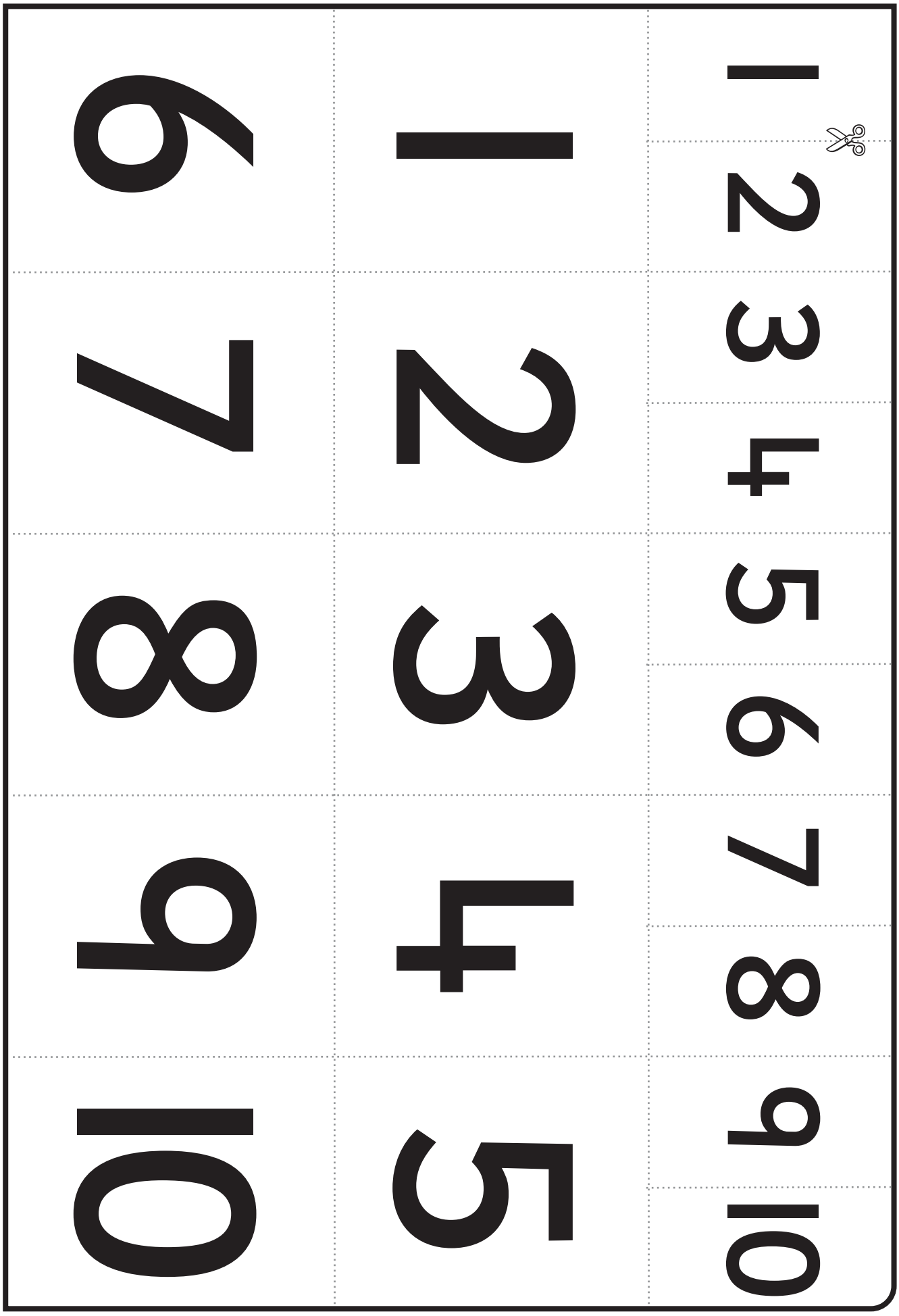

CJFallon NORTHERN IRELAND

11	11	16
12	12	17
13	13	18
14	14	19
15	15	20
16		
17		
18		
19		
20		

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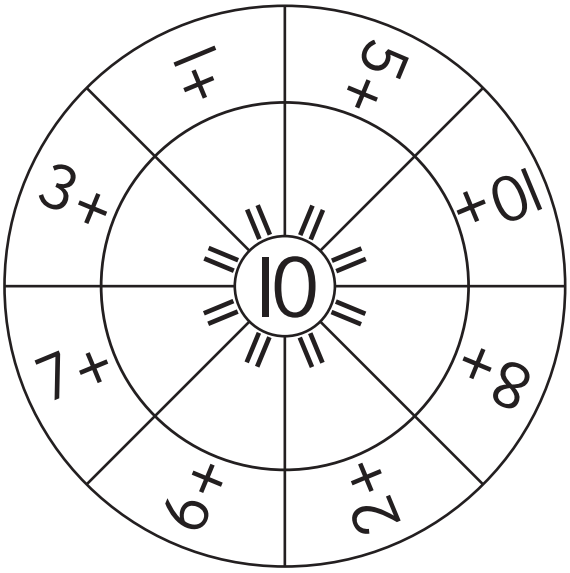
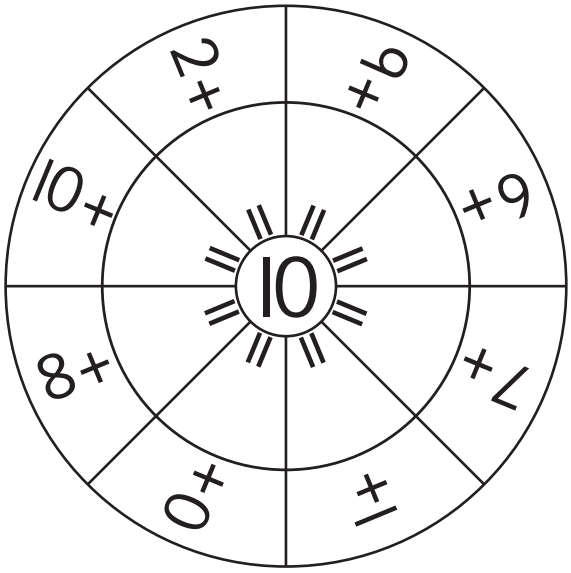
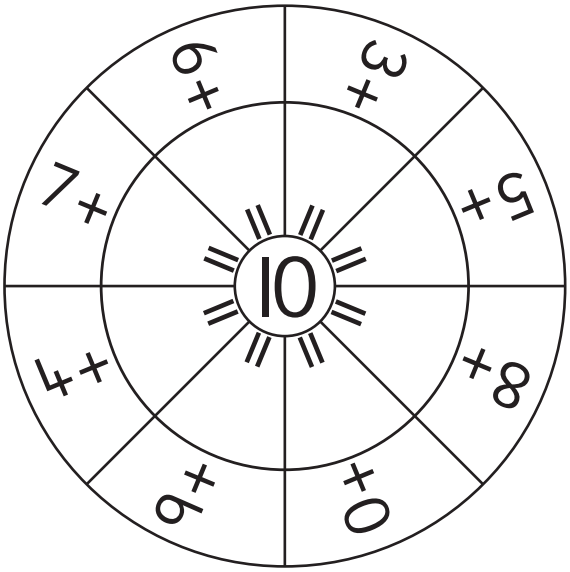
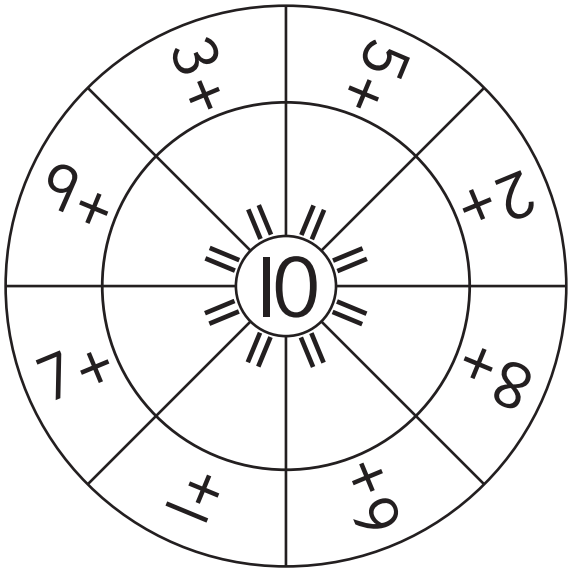
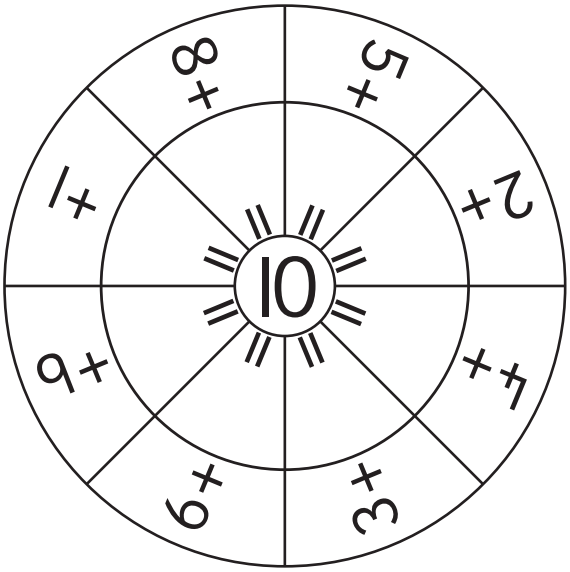
Fill in the missing numbers to make 10.

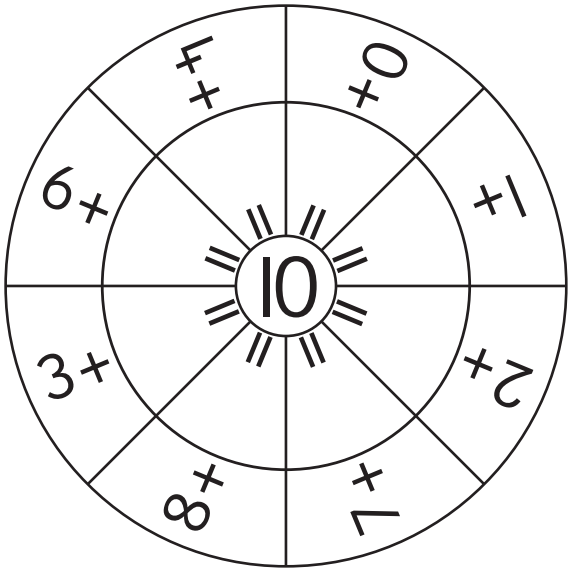












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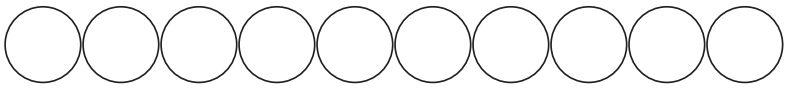
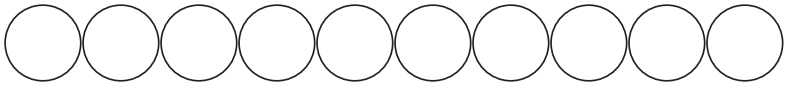
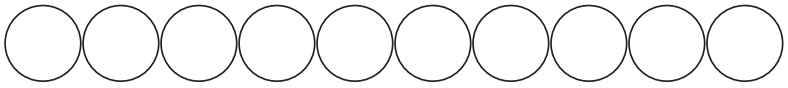
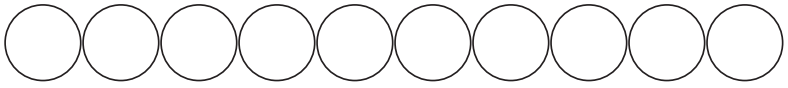
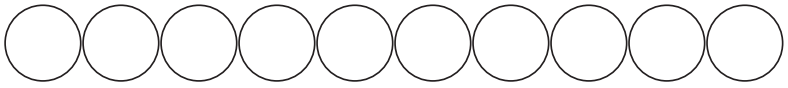
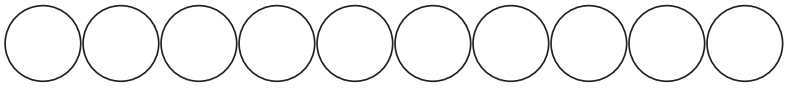
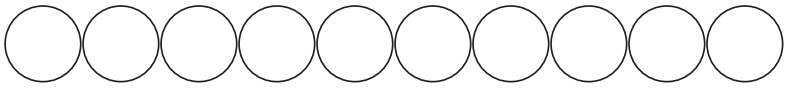
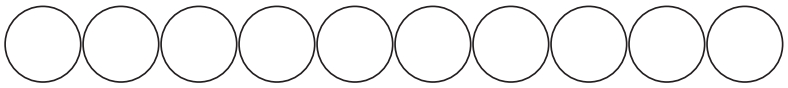
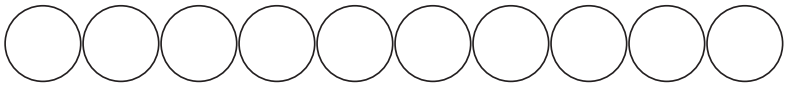
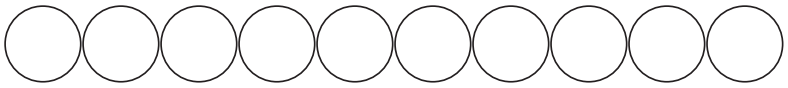
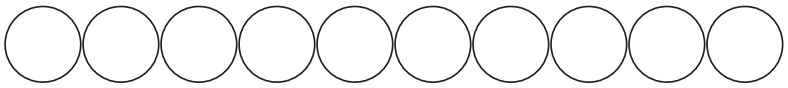
Colour the circles and write the sums to show the story of ten.

	0 + 10 = 10
	+ =
	+ =
	+ =
	+ =
	+ =
	+ =
	+ =
	+ =
	+ =
	+ =

1 + 1	6 + 6
2 + 2	7 + 7
3 + 3	8 + 8
4 + 4	9 + 9
5 + 5	10 + 10

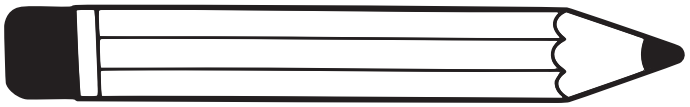
$8 + 3$	$9 + 2$
$8 + 4$	$7 + 5$
$9 + 3$	$8 + 6$
$9 + 5$	$8 + 5$
$7 + 4$	$9 + 7$

Find two numbers that make a double or a number bond of ten and write the answer to each sum.

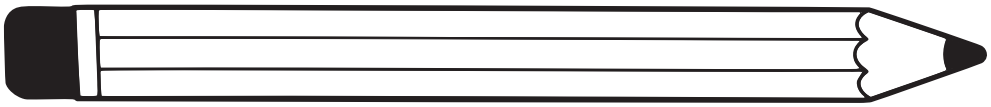
4 + 4 + 6 = ☐	3 + 3 + 5 = ☐
5 + 6 + 5 = ☐	6 + 2 + 6 = ☐
7 + 3 + 5 = ☐	6 + 3 + 4 = ☐
8 + 6 + 2 = ☐	9 + 7 + 1 = ☐
7 + 4 + 7 = ☐	9 + 9 + 1 = ☐
4 + 6 + 8 = ☐	7 + 7 + 5 = ☐

$$\begin{array}{r} 2 \\ 5 \\ +8 \\ \hline \end{array} \qquad \begin{array}{r} 6 \\ 7 \\ +6 \\ \hline \end{array} \qquad \begin{array}{r} 7 \\ 8 \\ +3 \\ \hline \end{array} \qquad \begin{array}{r} 2 \\ 9 \\ +9 \\ \hline \end{array}$$

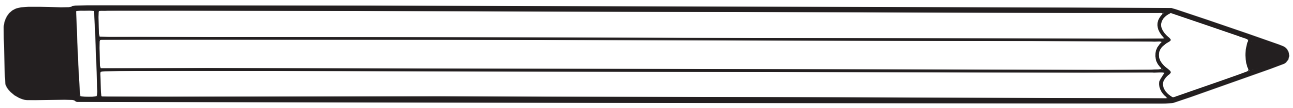
long

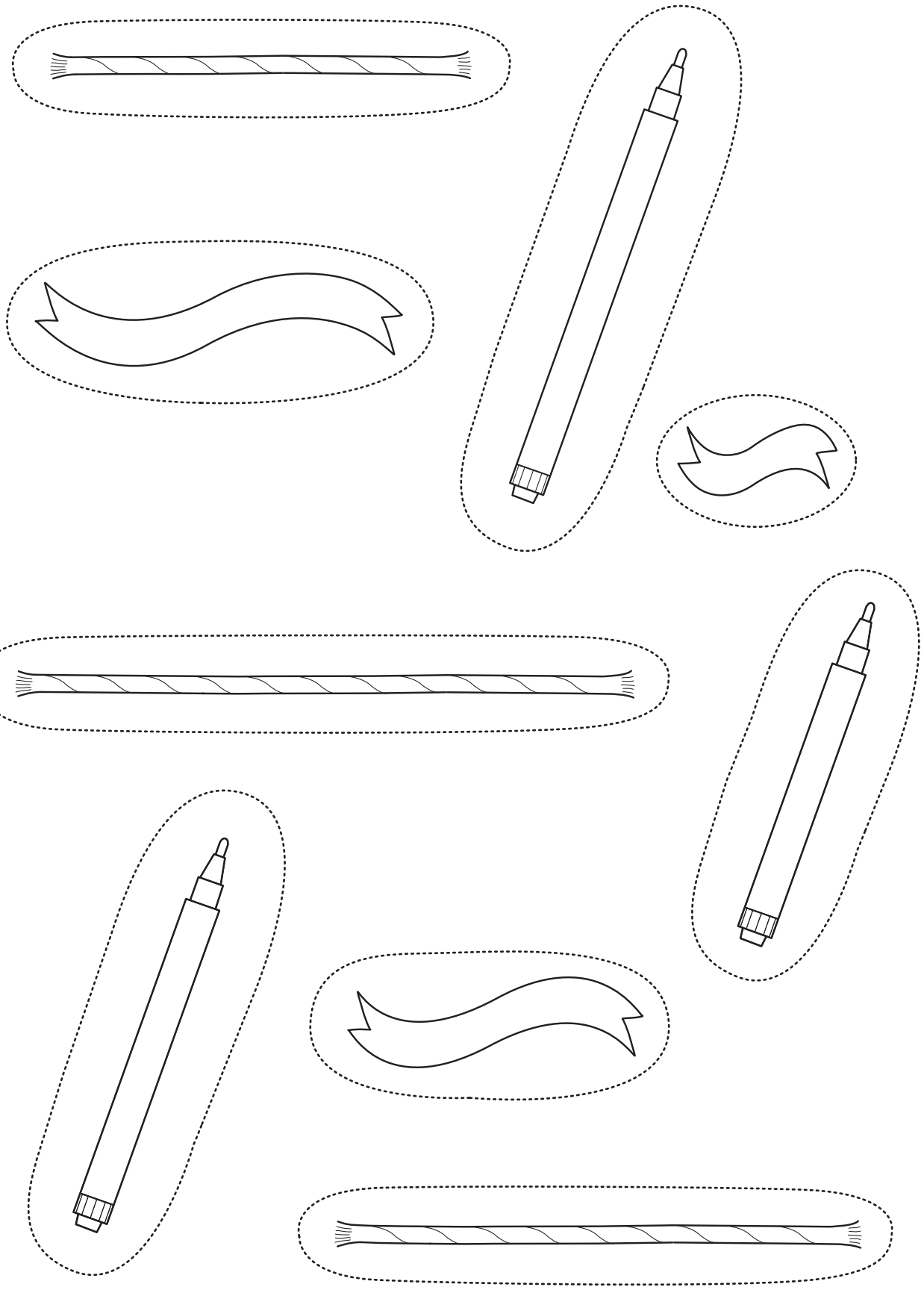


longer

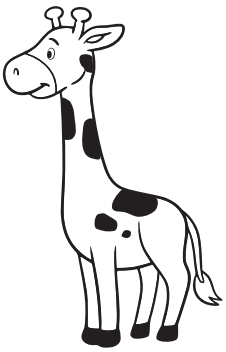


longest

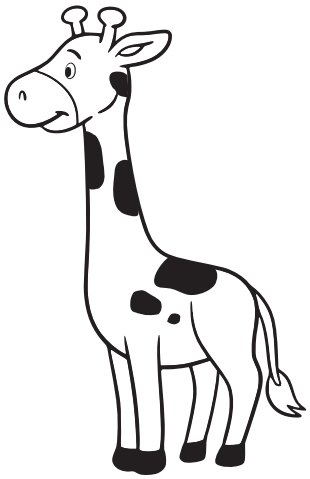




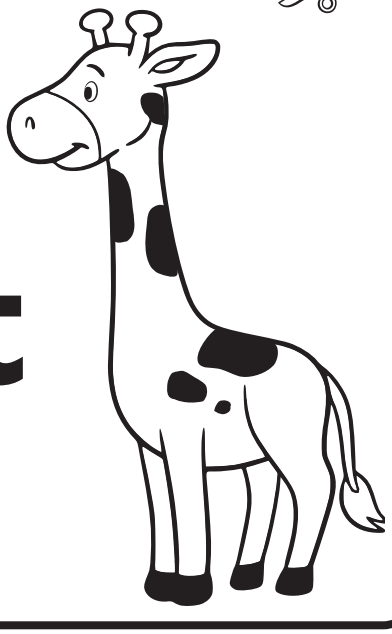
tall



taller



tallest



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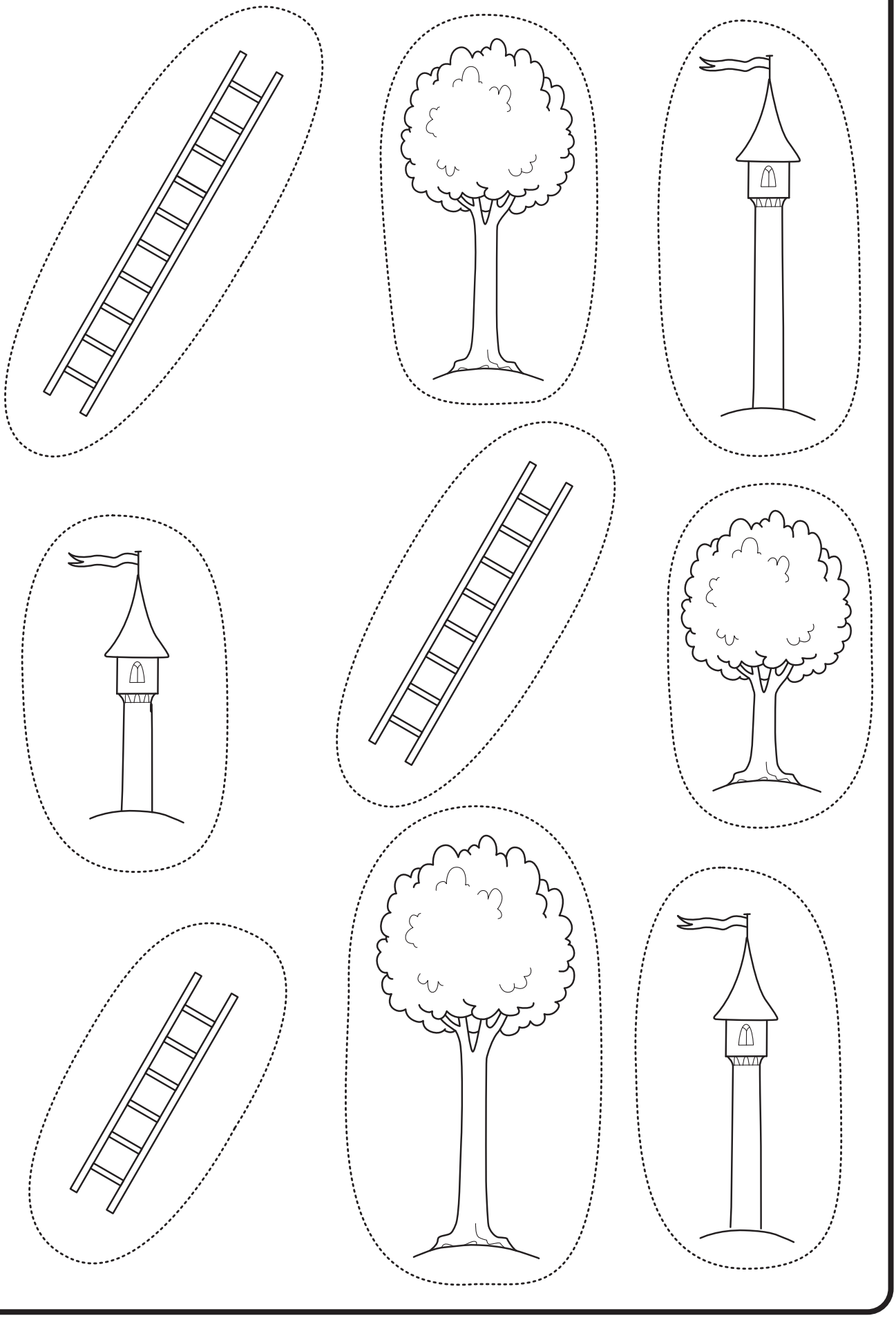
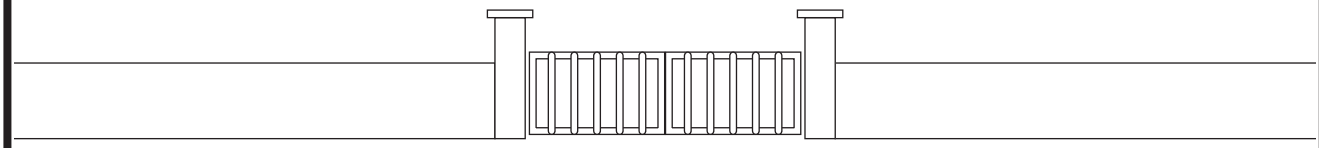
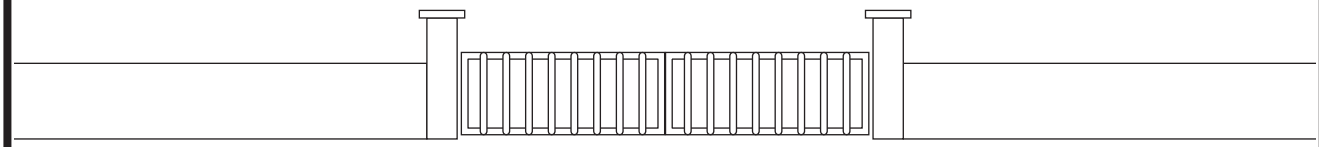


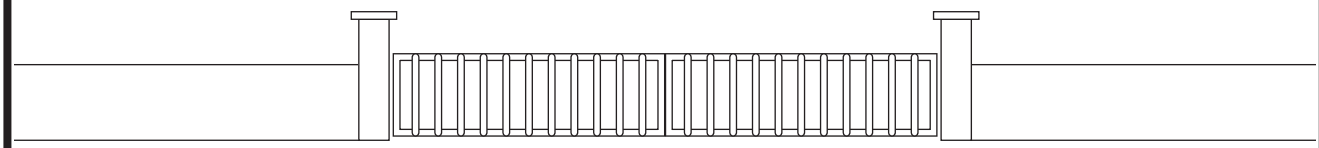
wide

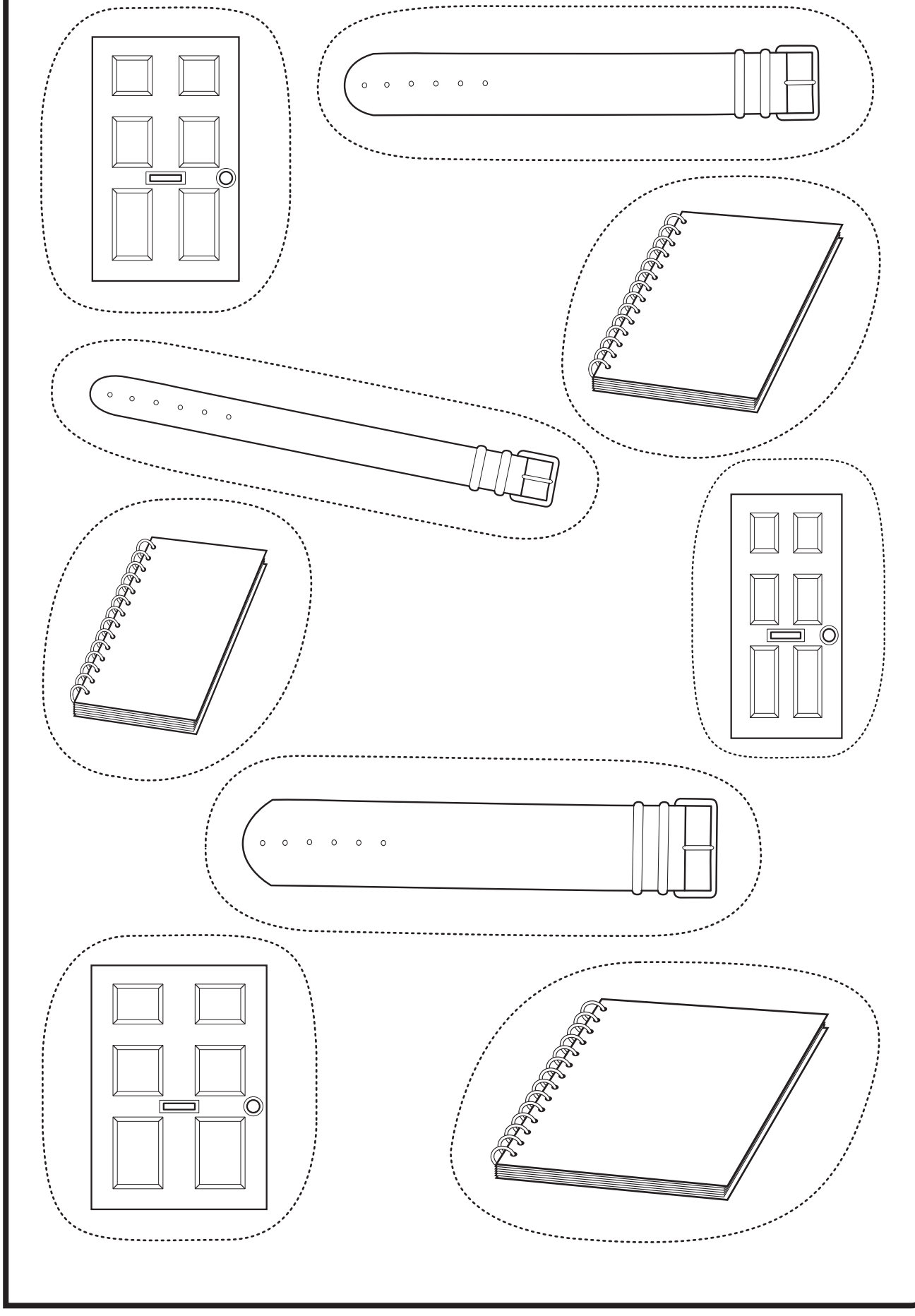


wider

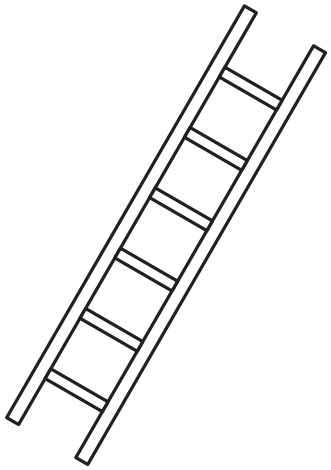


widest

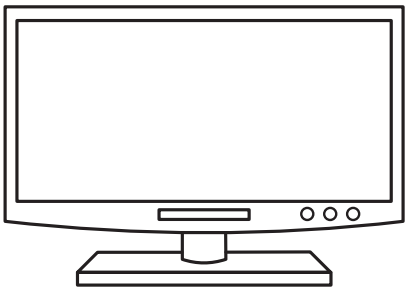




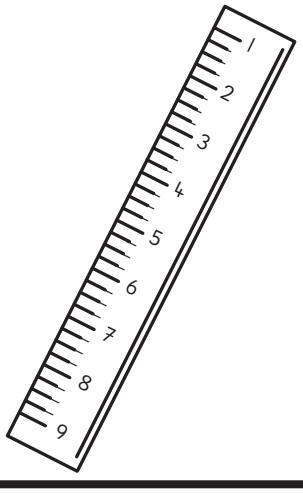
1. Draw something that is shorter/taller than a ladder.

shorter		taller
		

2. Draw something that is narrower/wider than a television.

narrower		wider
		

3. Draw something that is shorter/longer than a ruler.

shorter		longer
		

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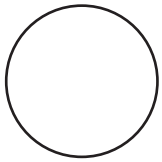
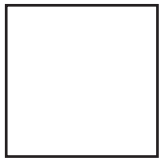
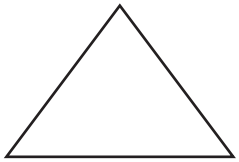
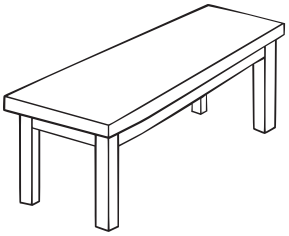
circle	
square	
triangle	
rectangle	

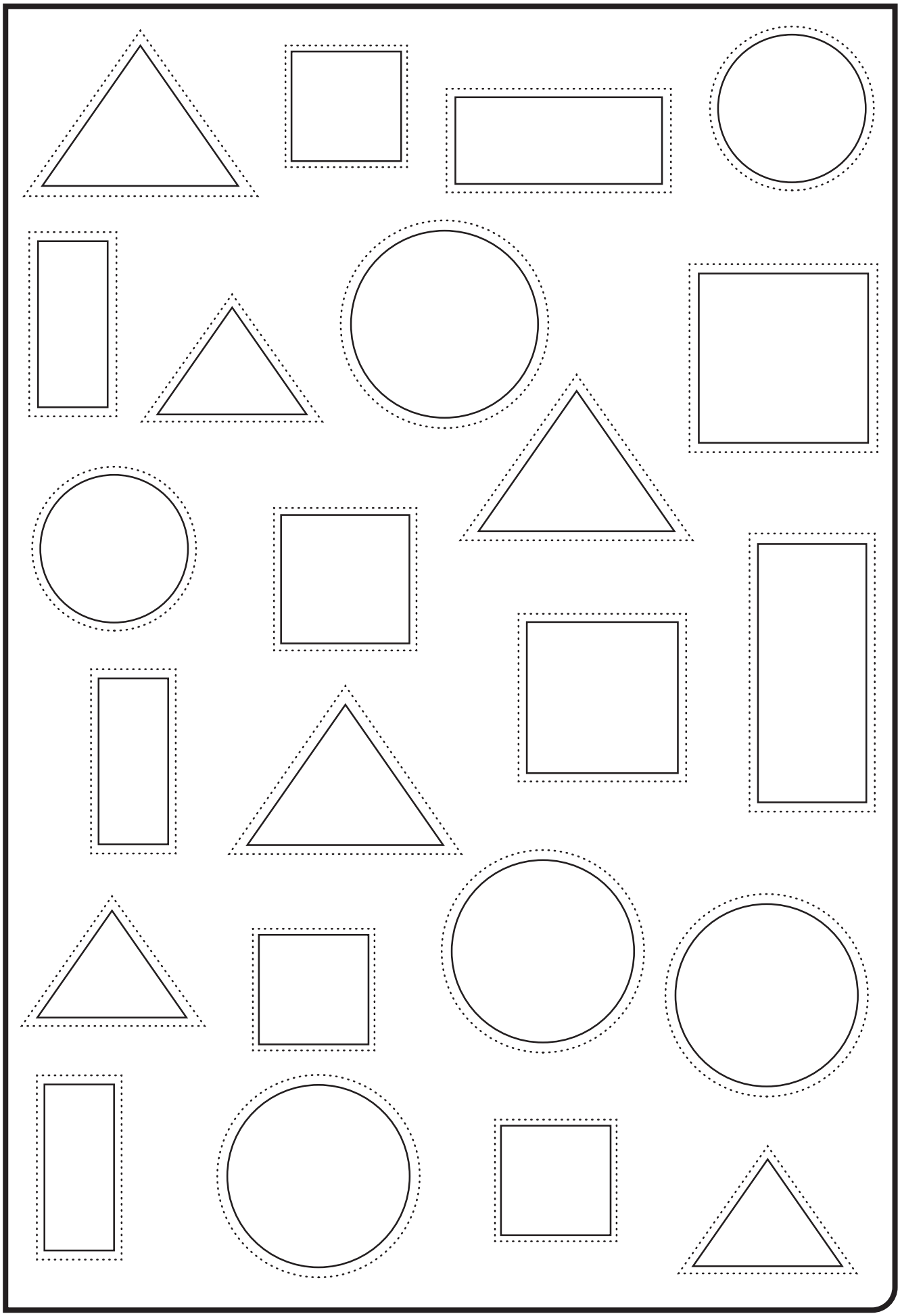
rectangle

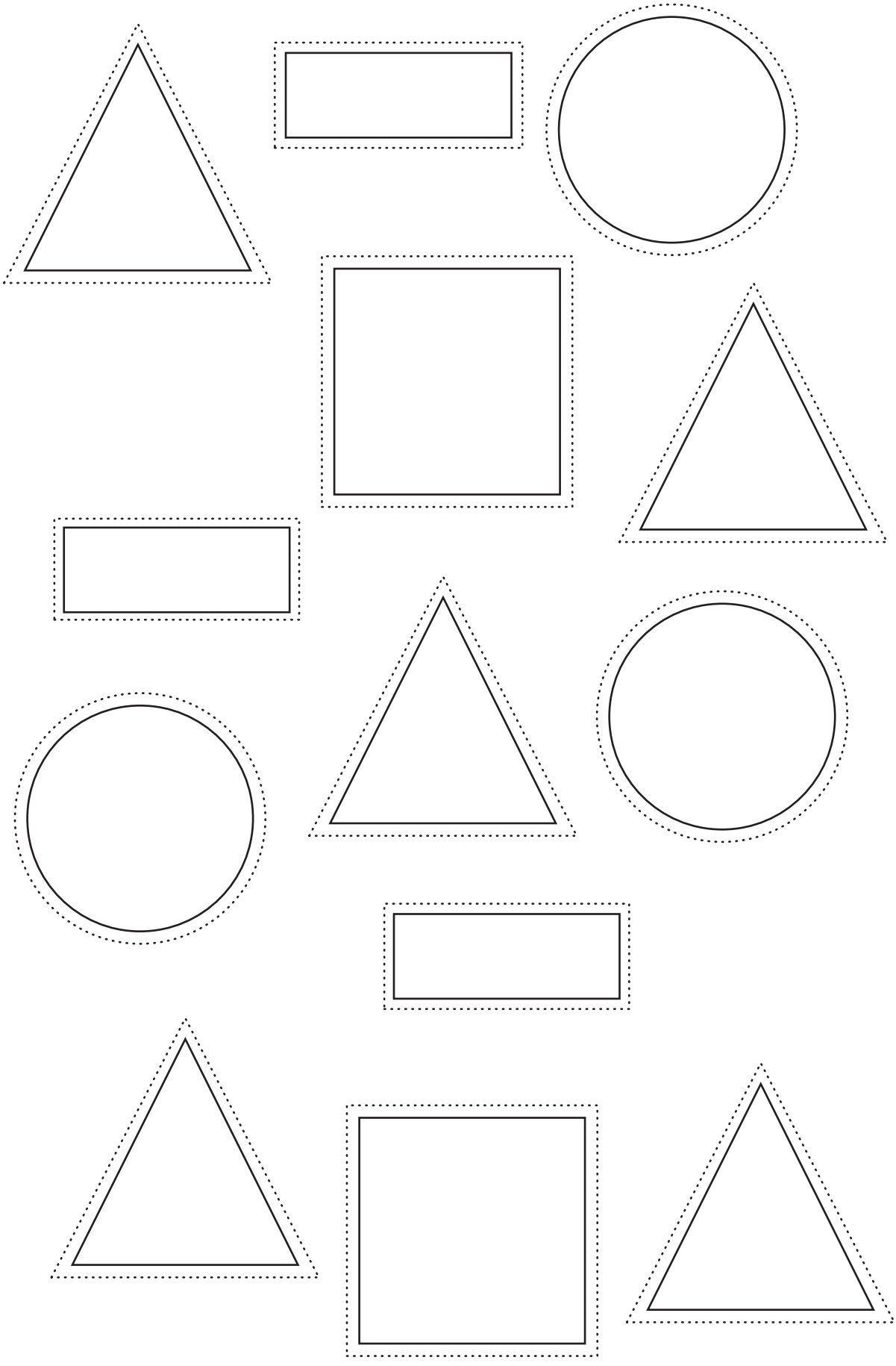


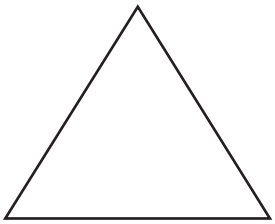
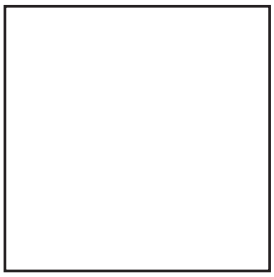
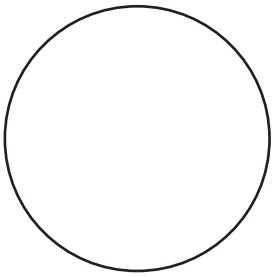
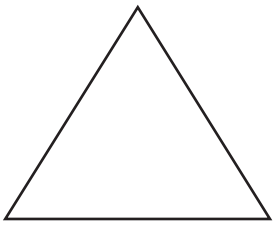
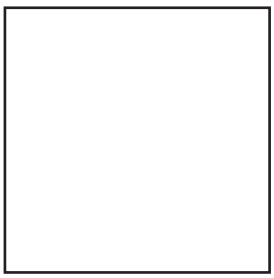
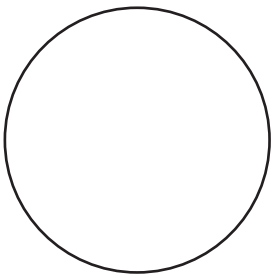
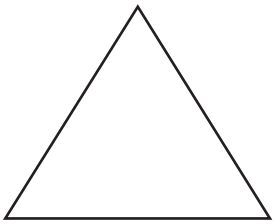
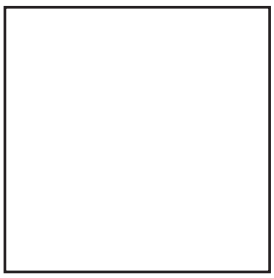
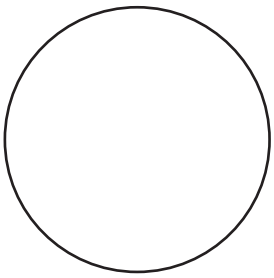
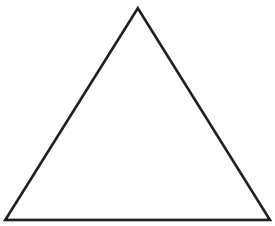
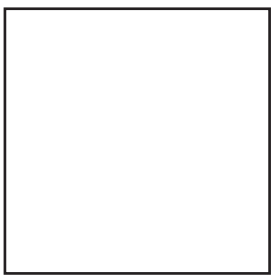
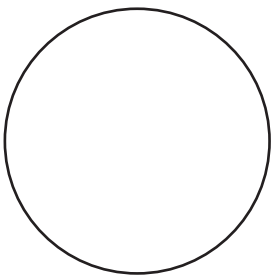
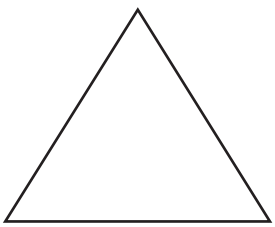
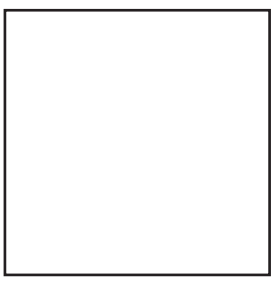
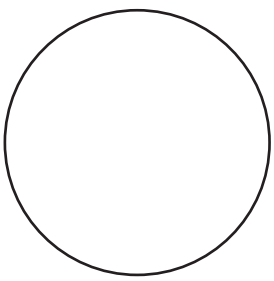
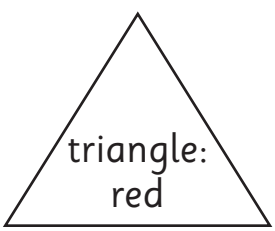
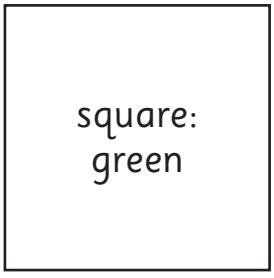
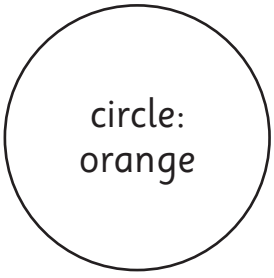
square

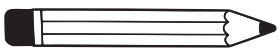
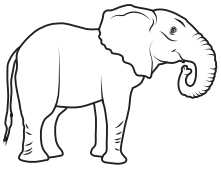
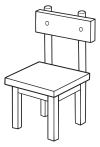
circle

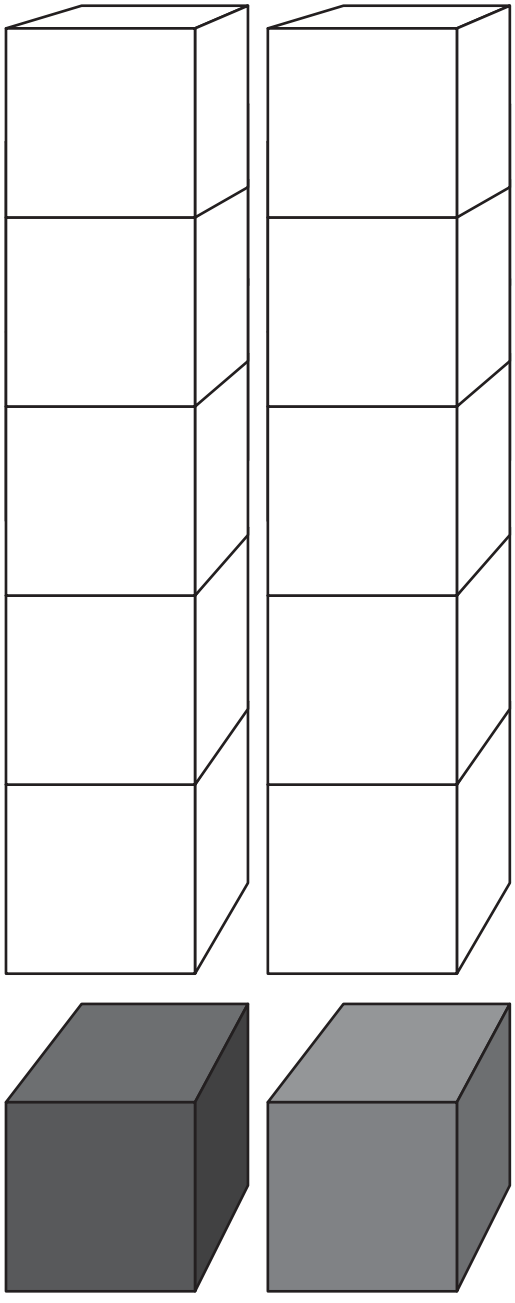
triangle





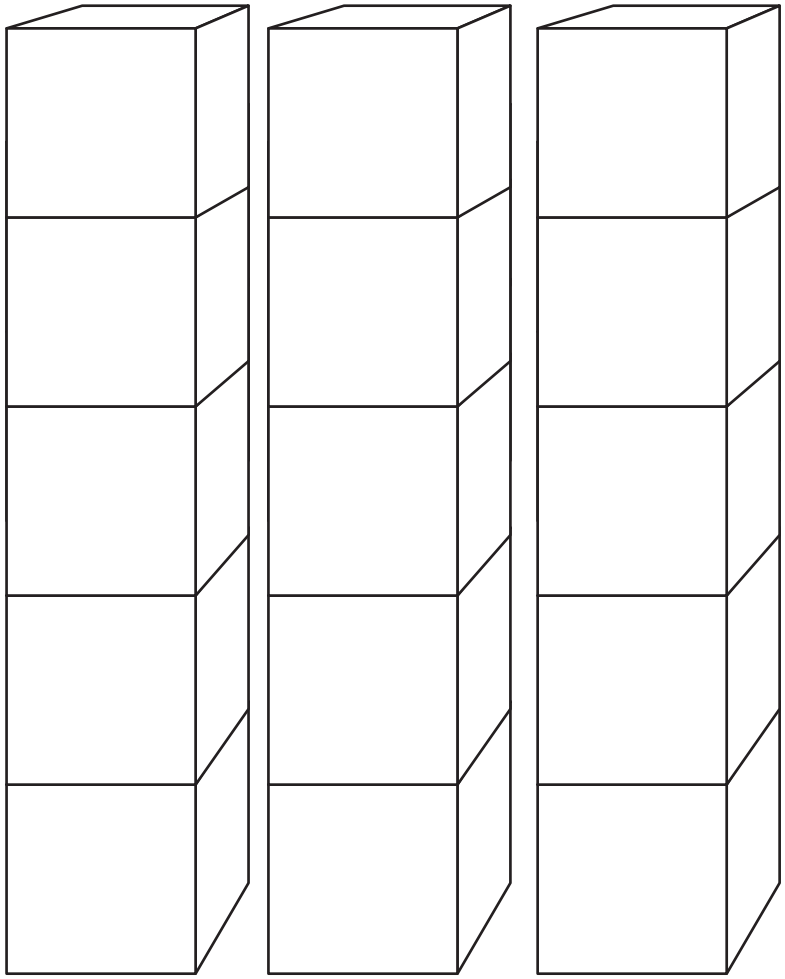
			
			
			
			
			
 triangle: red	 rectangle: blue	 square: green	 circle: orange

hard 	**soft** 
big 	**small** 
has wheels 	**has no wheels** 
has eyes 	**has no eyes** 



red cube

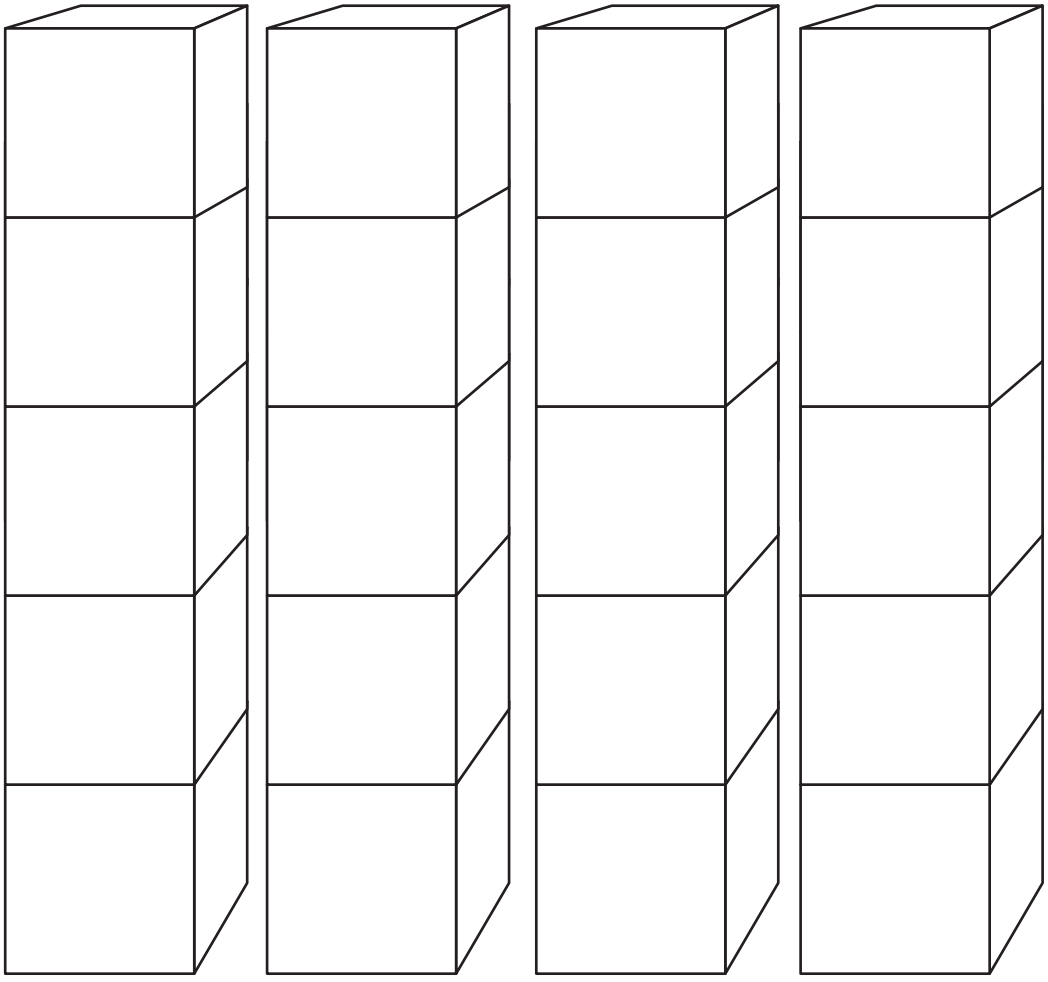
green cube



red cube

green cube

blue cube



red cube

green cube

blue cube

yellow cube

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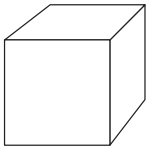
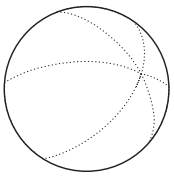
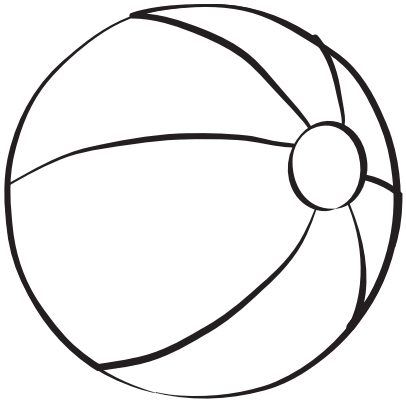
a



b

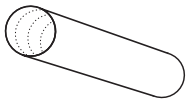


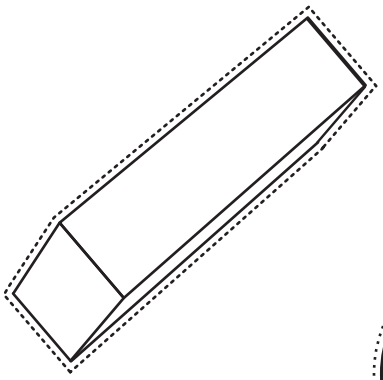


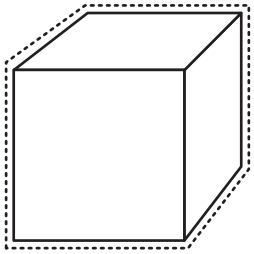
c

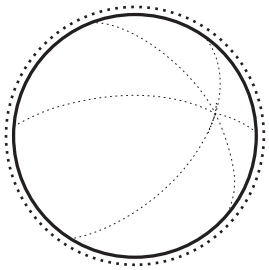


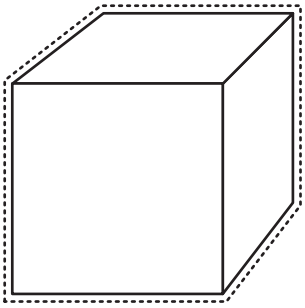
d

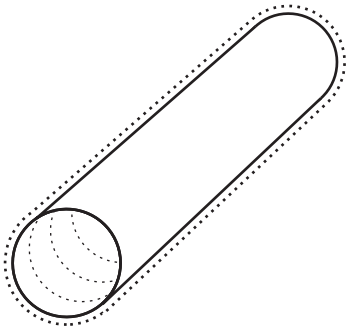


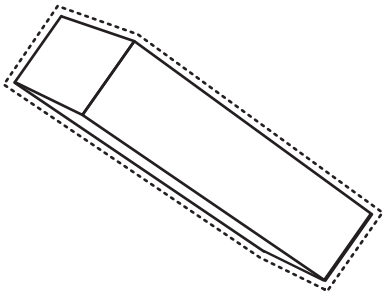


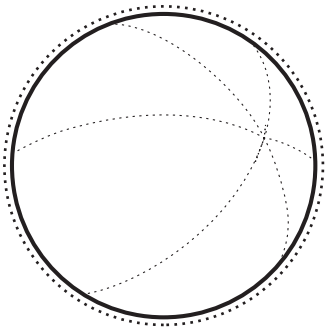


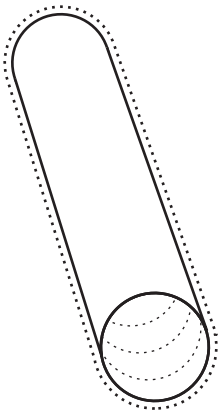


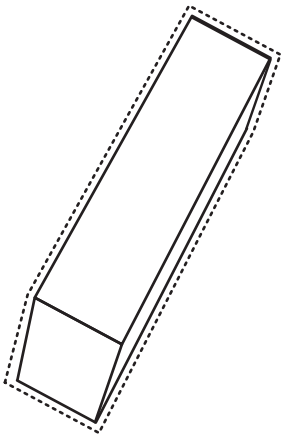












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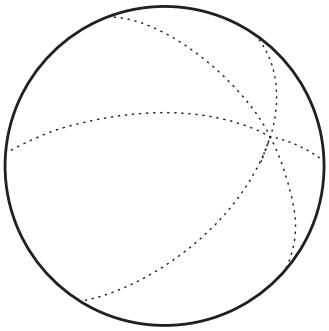
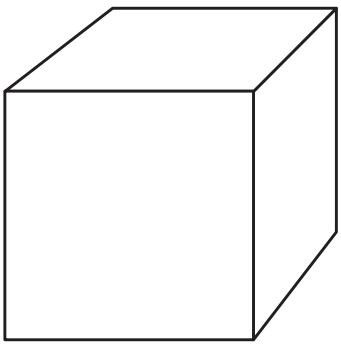
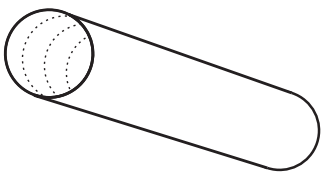
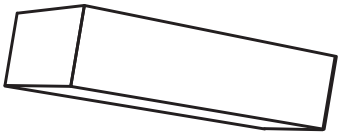
Shape	Number of faces	Real things
a  s ___ ___ ___ ___	flat faces ☐ curved faces ☐ total faces ☐	
b  c ___ ___ ___	flat faces ☐ curved faces ☐ total faces ☐	
c  c ___ l ___ n ___ e ___	flat faces ☐ curved faces ☐ total faces ☐	
d  c ___ ___ ___ ___ ___	flat faces ☐ curved faces ☐ total faces ☐	

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Listen to the teacher read the clues. Guess the shape.

a What am I?
I don't have any flat faces.
I am fully round.
I am like a ball.

I am a _____.

b What am I?
I have six flat faces.
I have eight corners.
All my faces are the same size.

I am a _____.

c What am I?
I have three faces.
One face is curved.
Two of my faces are flat.
I am like a pipe.

I am a _____.

d What am I?
Not all of my faces are the same size.
New shoes come in my shape.
Cereal boxes are in my shape.
Some of my faces are the same size.

I am a _____.

e What am I?
I have only one face.
My face is not flat.
I have no corners.

I am a _____.

f What am I?
I have eight corners.
I have six flat faces.
Only my opposite faces are the same size.

I am a _____.

g What am I?
Two of my faces are in the shape of a circle.
I have only one other face.
This face is curved.

I am a _____.

h What am I?
I have eight corners.
I have no curved faces.
Ice from the fridge is usually in my shape.

I am a _____.

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Turn it around.	Push it over.
Stand it up tall.	Place it on its side.
Flip it over.	Slide it along the table.

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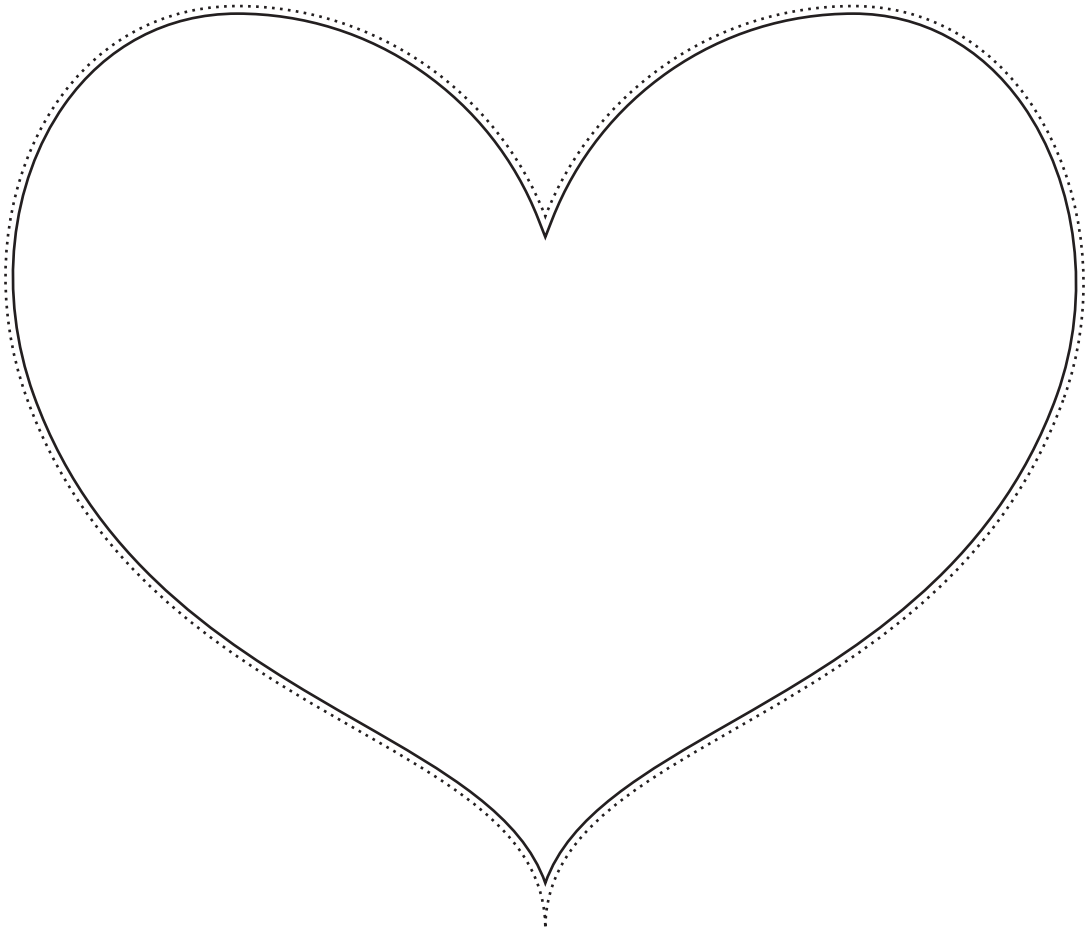

Notation Board

t	u

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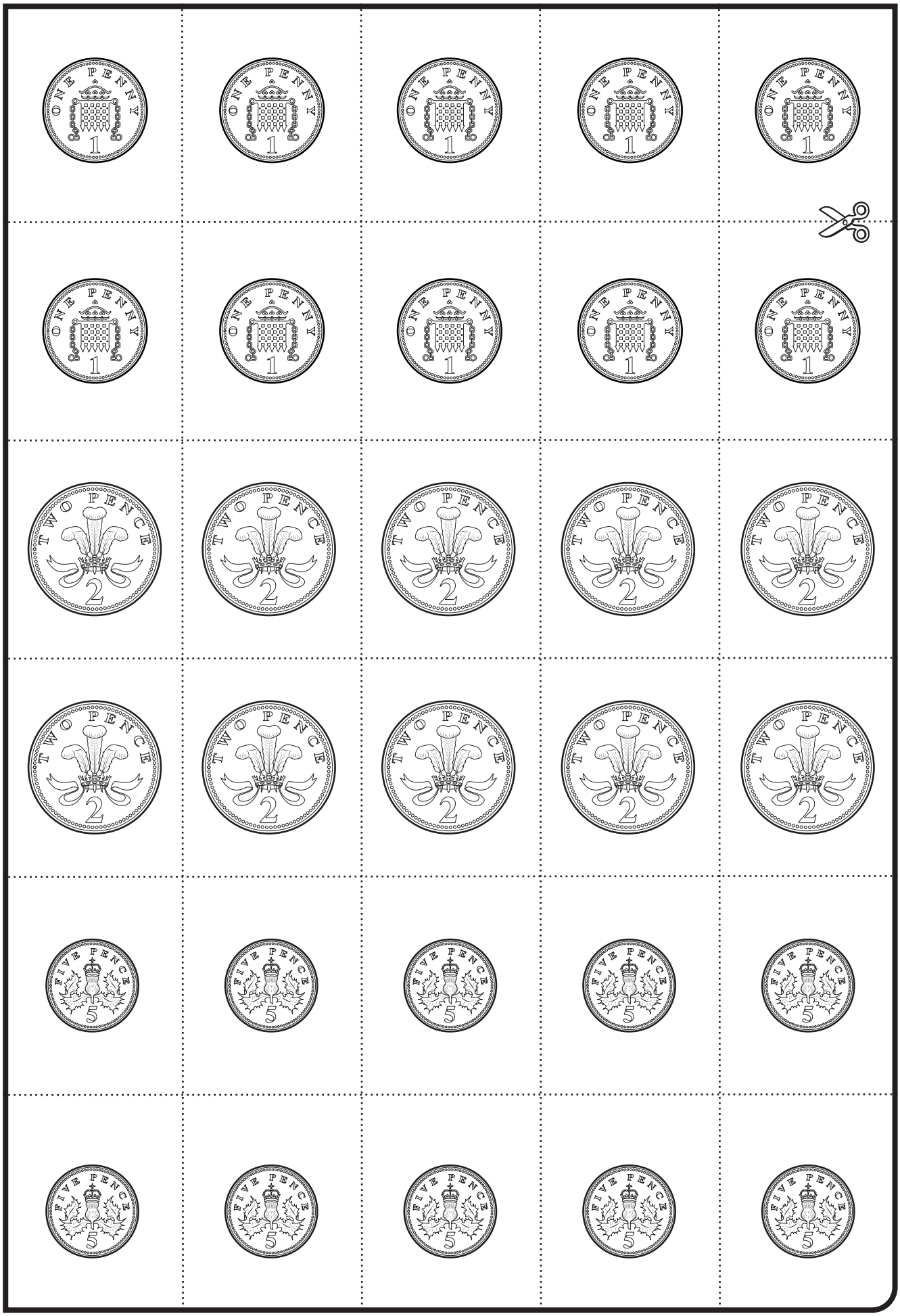

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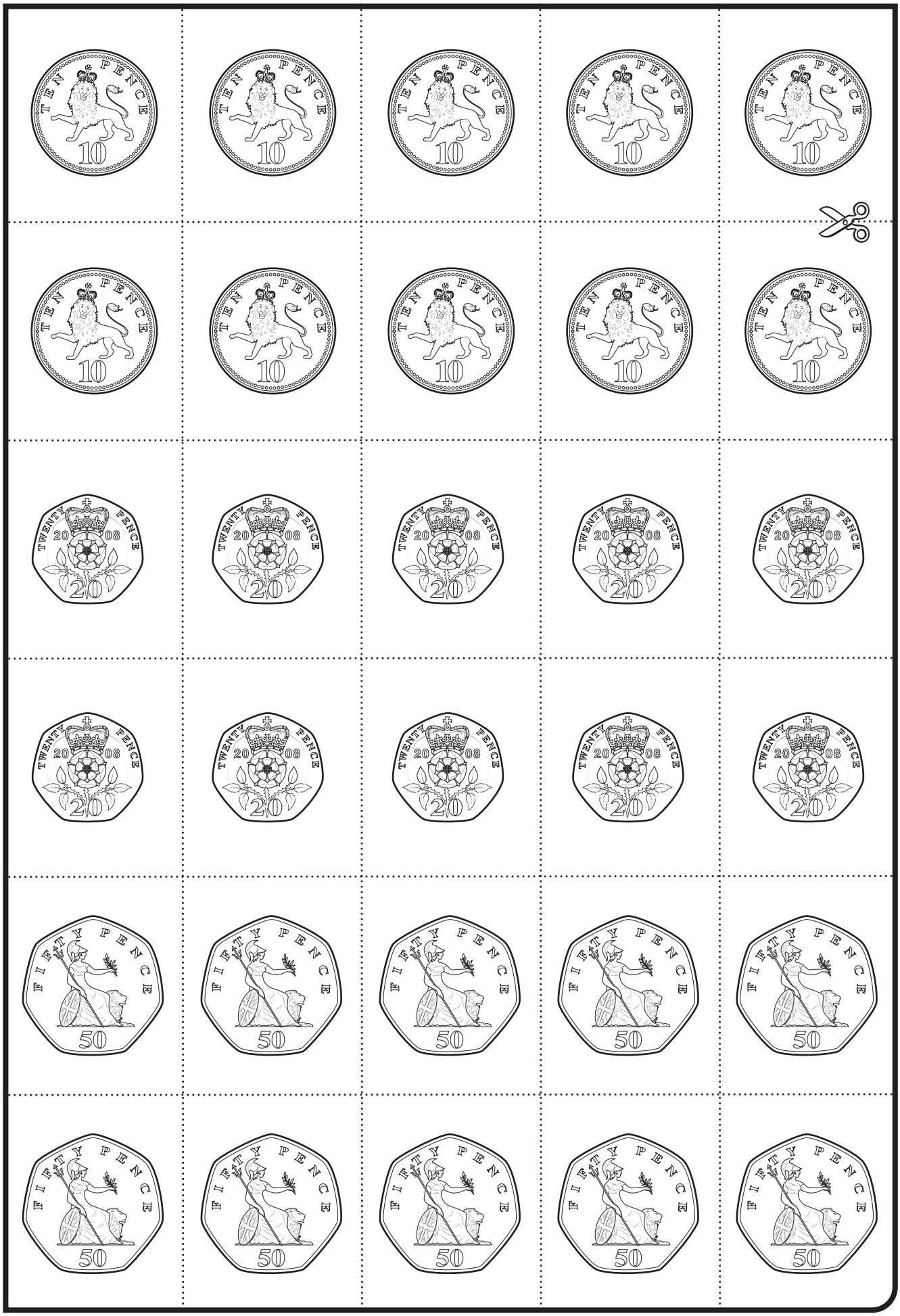

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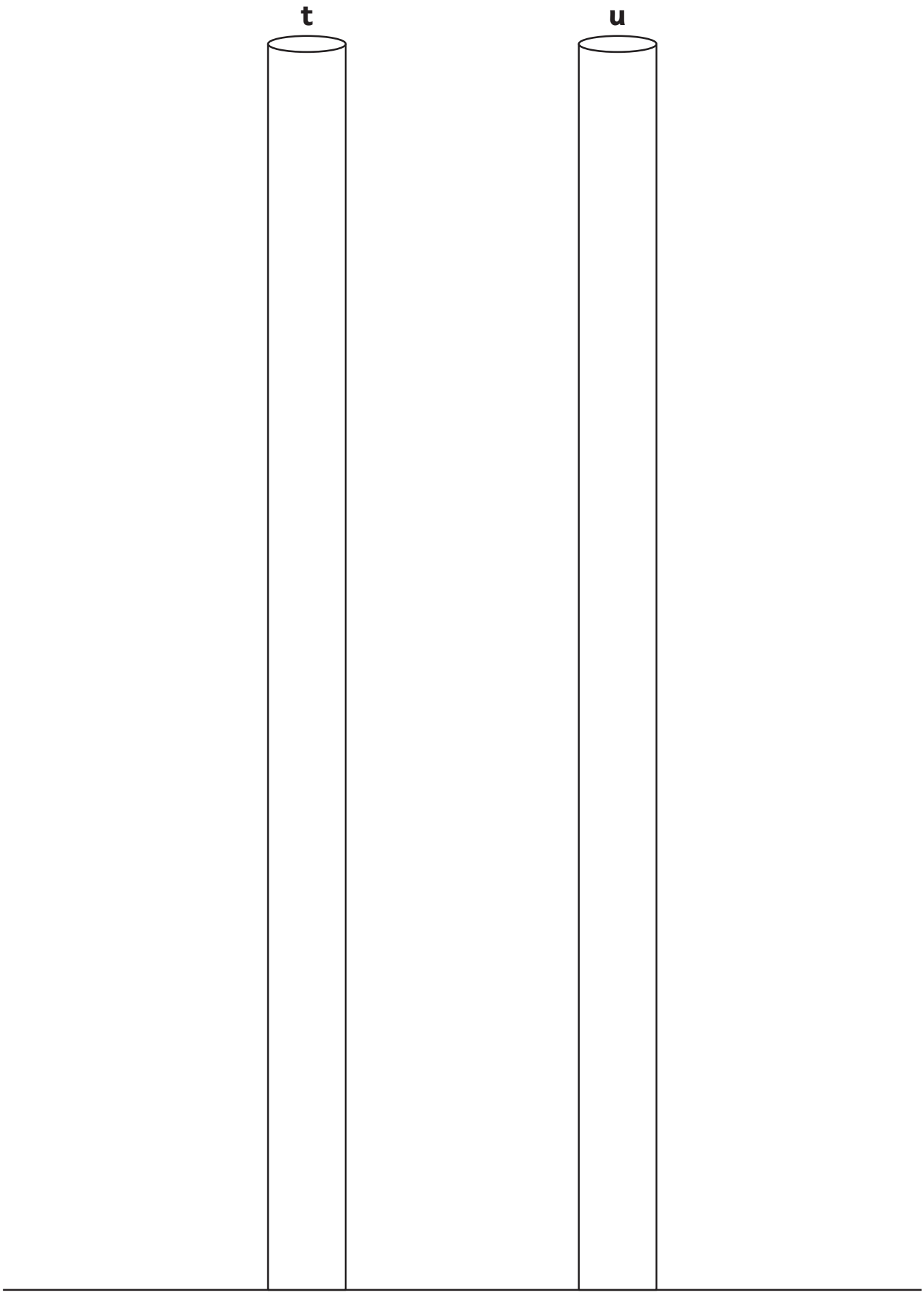
Abacus



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What's my number?

I have no tens.
I am an even number.
I am less than 8.
I am greater than 4.

I am ☐.

What's my number?

I have no tens.
I am an odd number.
I am greater than 7.
I am less than 10.

I am ☐.

What's my number?

I have one ten.
I have some units.
My units are greater than 6.
My units are less than 8.

I am ☐.

What's my number?

I have one ten.
I have some units.
My units are less than 9.
My units are greater than 7.

I am ☐.

What's my number?

I have some units.
I don't have 6 units.
I have half of that number of units.
I have no tens.

I am ☐.

What's my number?

I have some units.
I don't have 8 units.
I have half of that number of units.
I have one ten.

I am ☐.

What's my number?

I have some units.
I don't have 2 units.
I do have double that number of units.
I have one ten.

I am ☐.

What's my number?

I have some units.
I don't have 10 units.
I have half of that number of units.
I have no ten.

I am ☐.

What's my number?

I have one ten.
I have some units.
My units come after 5.
My units come before 7.

I am ☐.

What's my number?

I have some units.
I have no ten.
My units come before 10.
My units come after 8.

I am ☐.

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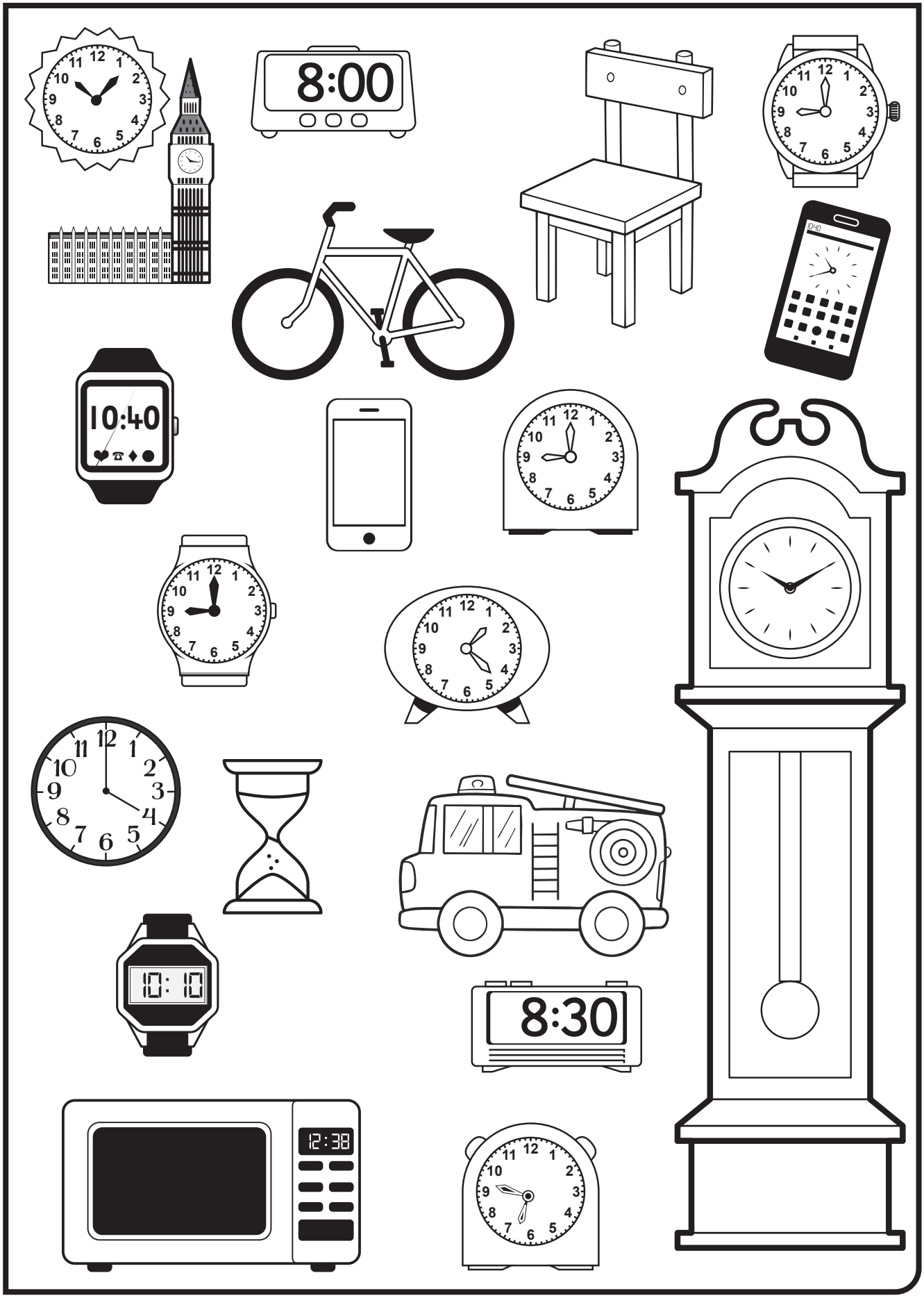
Colour the objects that tell the time.



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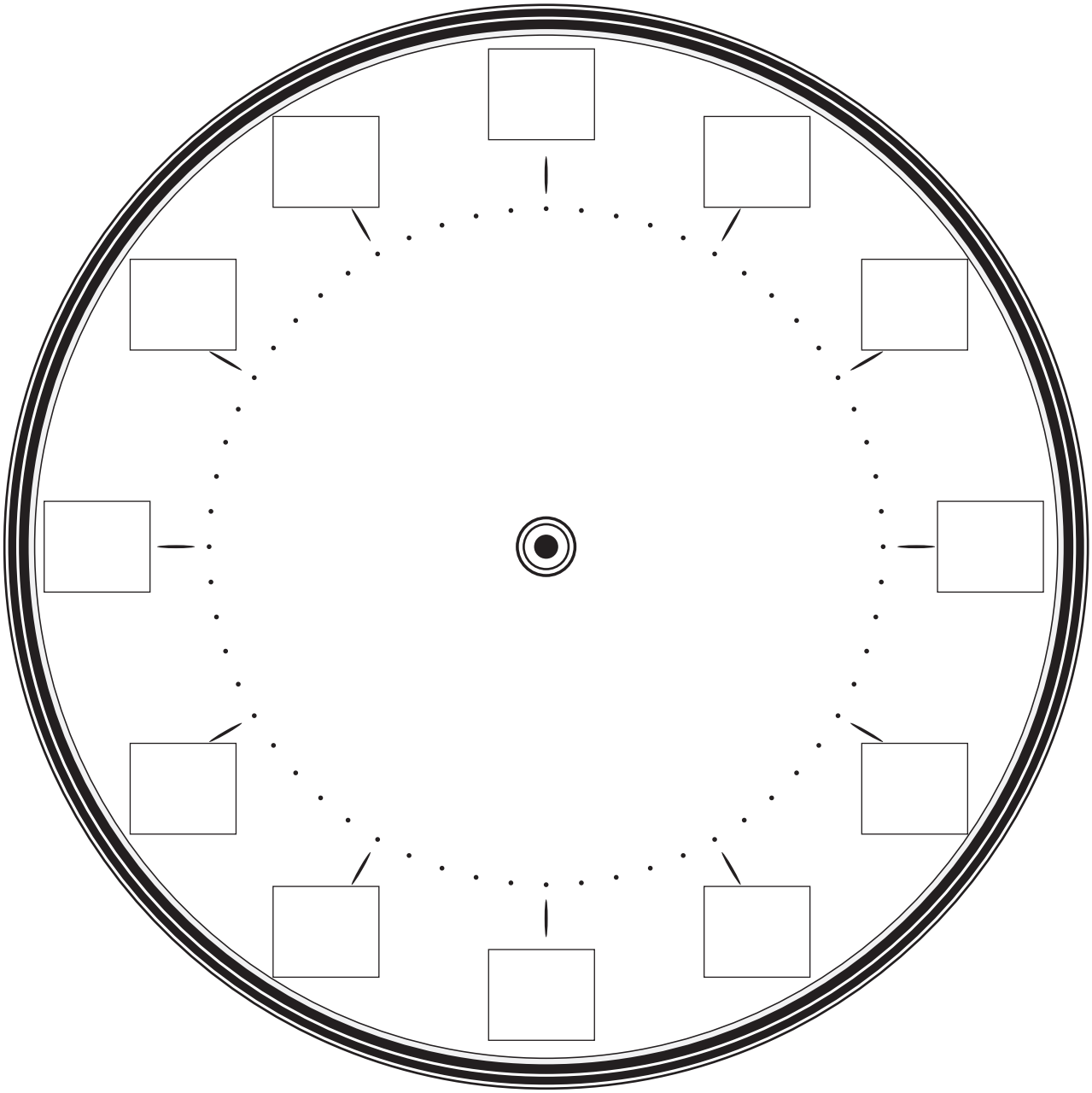
Make a clock!



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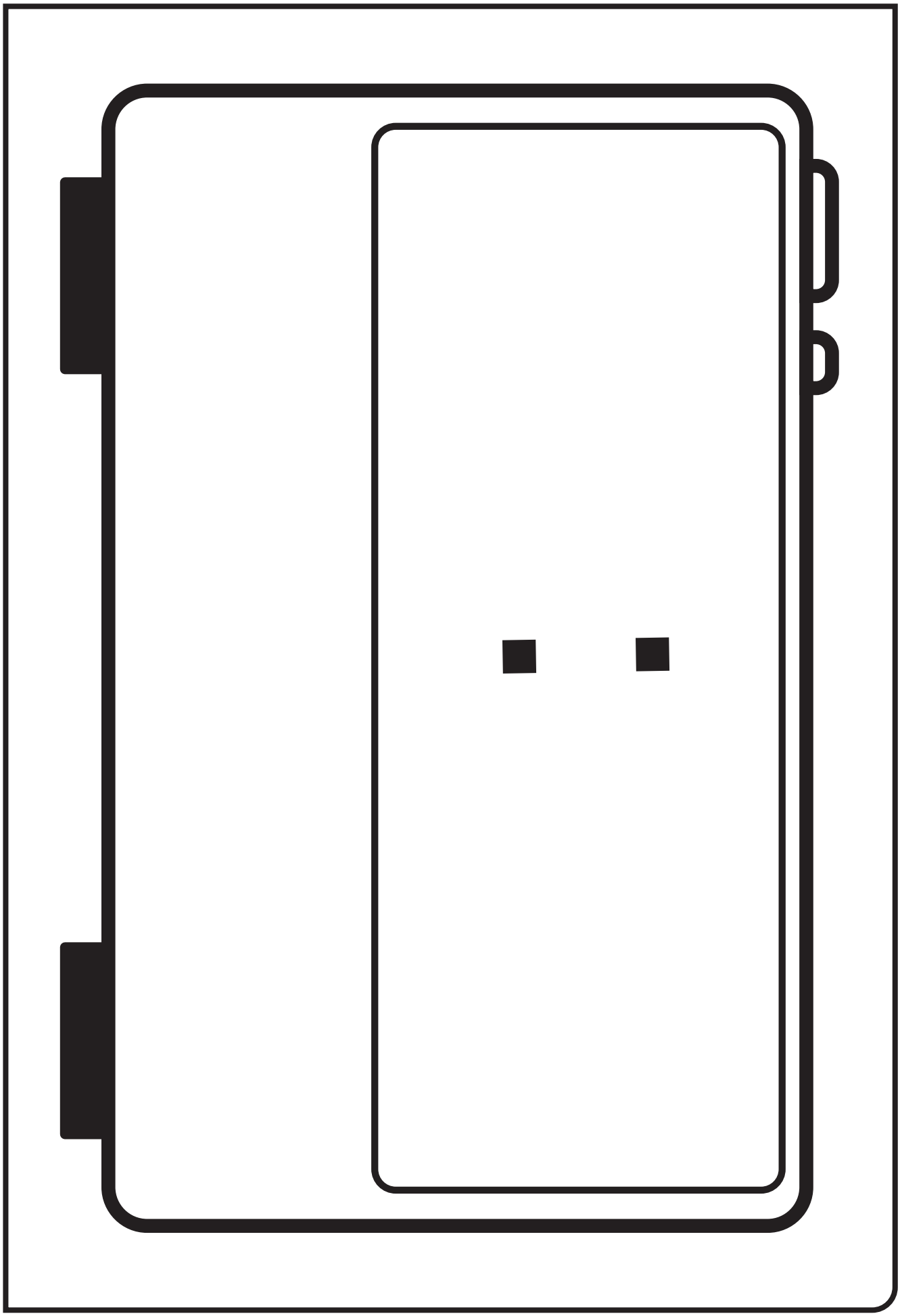
1	2	3	4	5	6
7	8	9	10	11	12

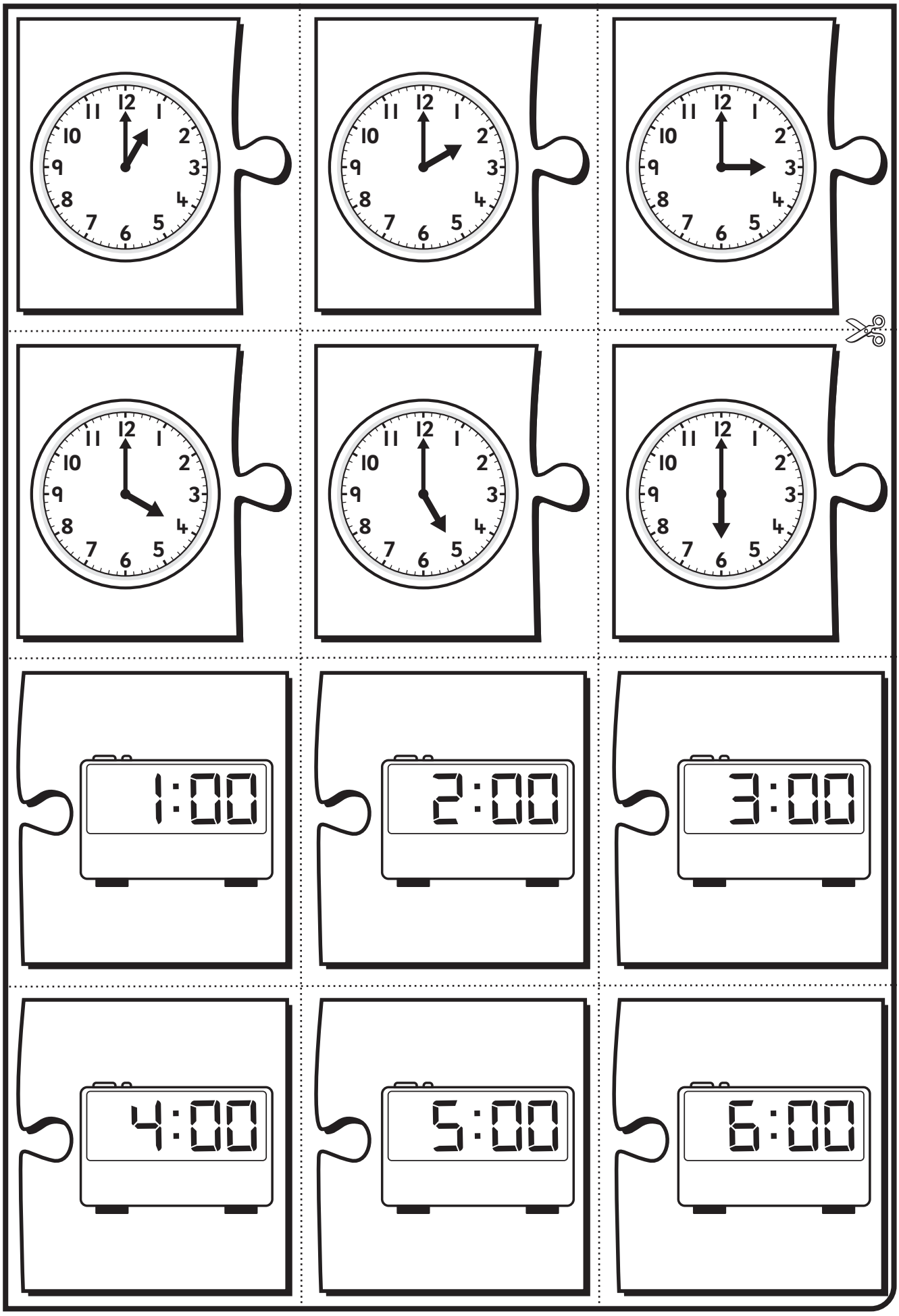


1	2	3	4	5	6
7	8	9	10	11	12



1	2	3	4	5	6
7	8	9	10	11	12





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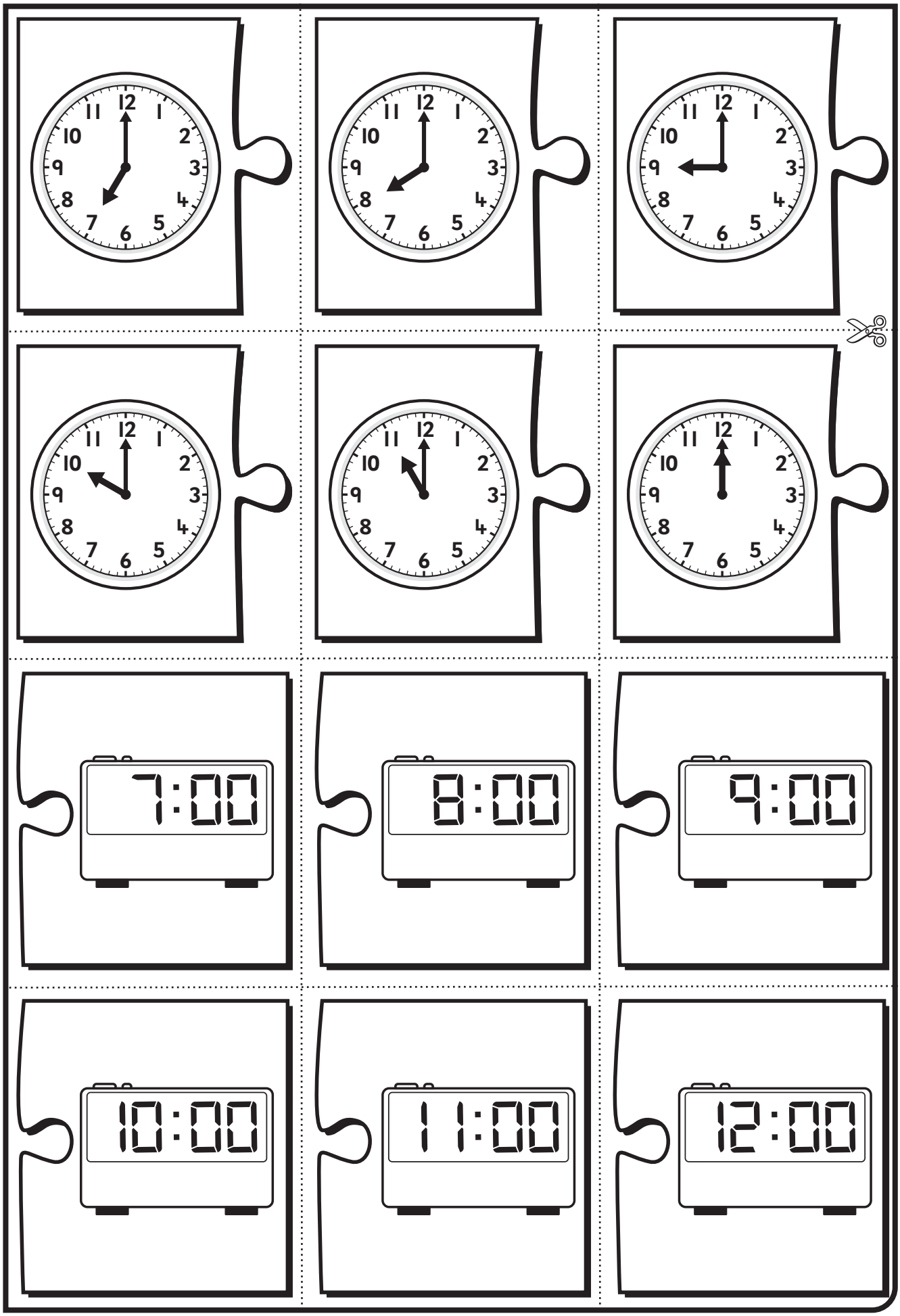
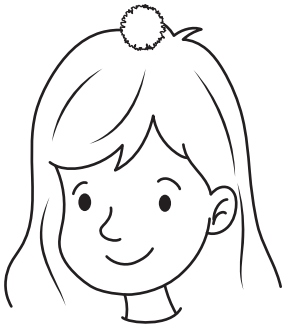
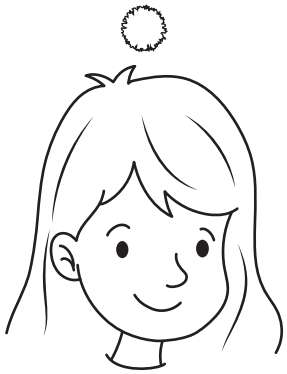
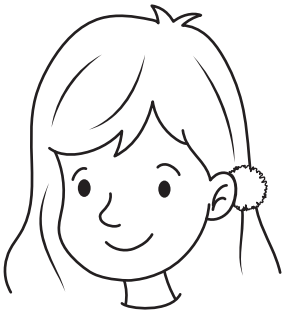
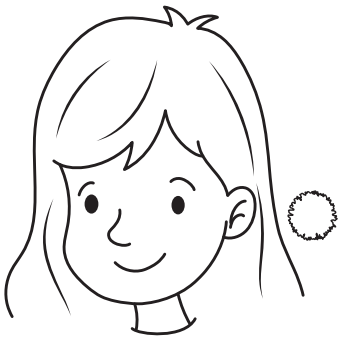
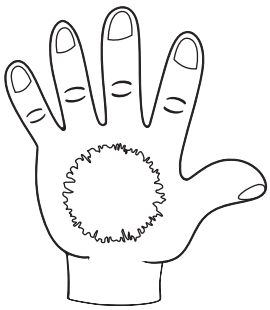

7:00
8:00
9:00
10:00
11:00
12:00











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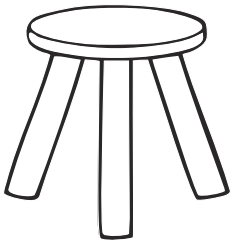
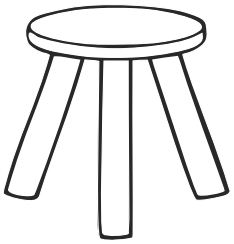


on top of



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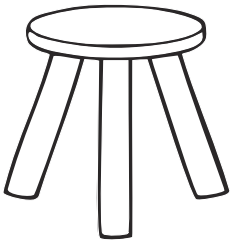

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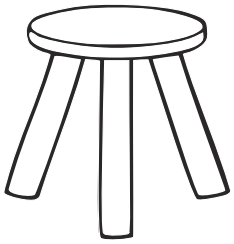

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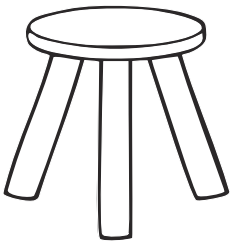

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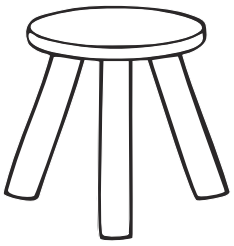

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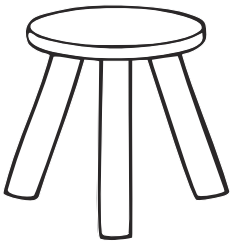

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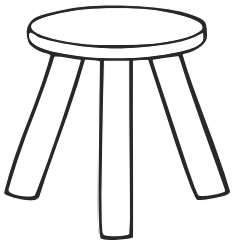

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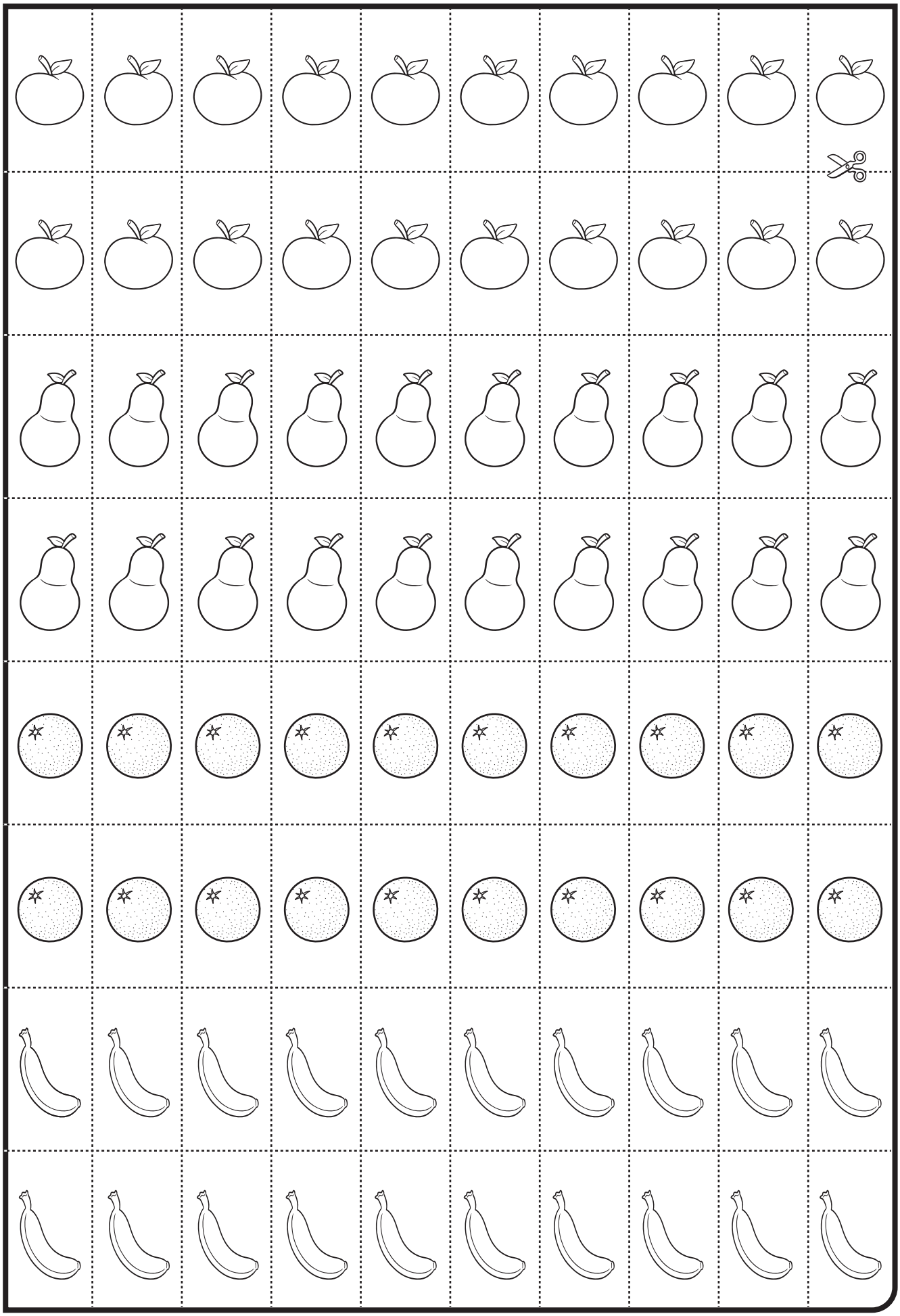
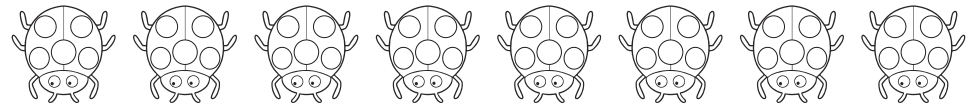
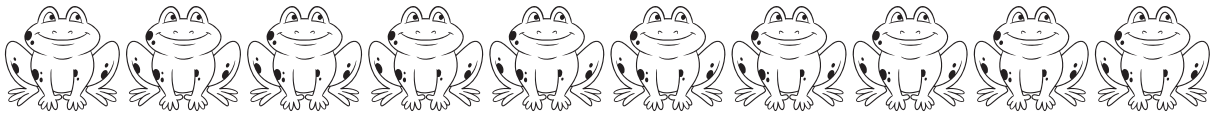


Colour the set that has more.

a





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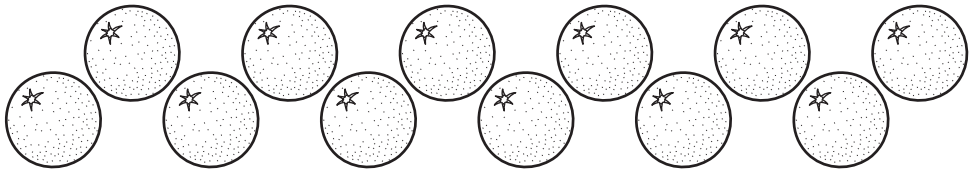



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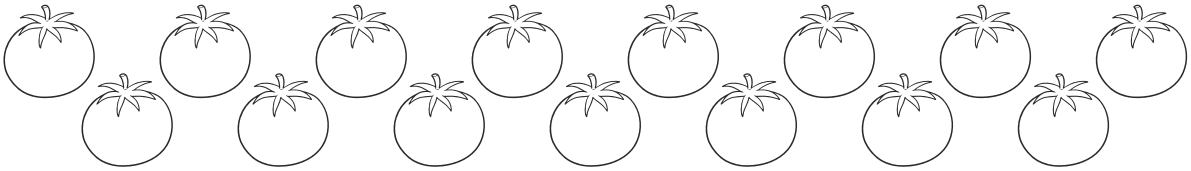

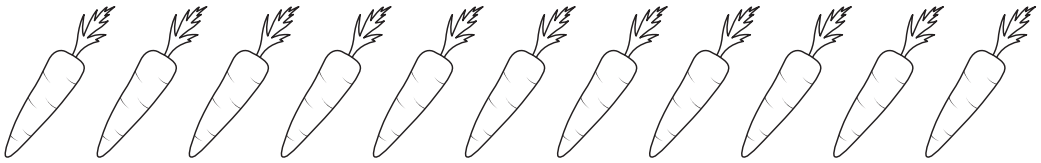

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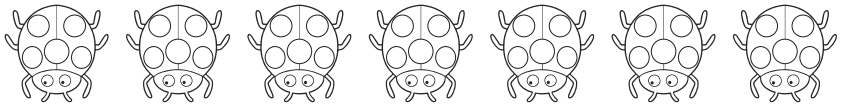

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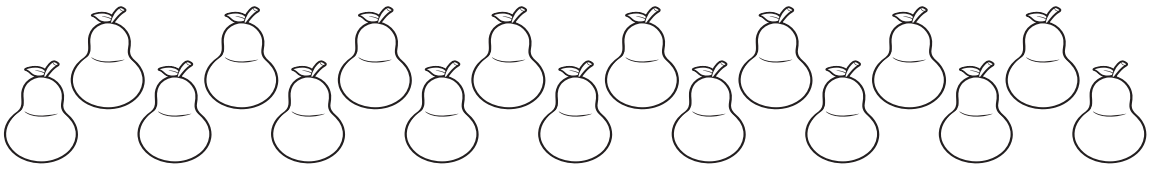
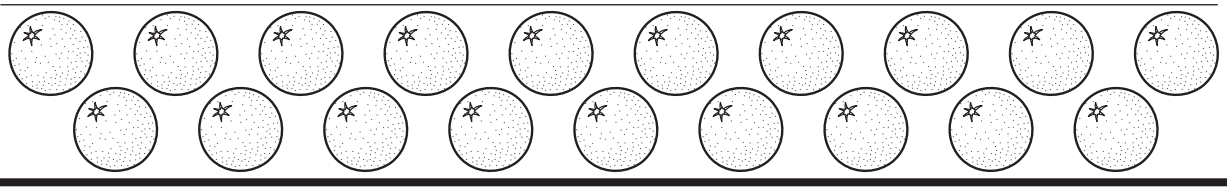
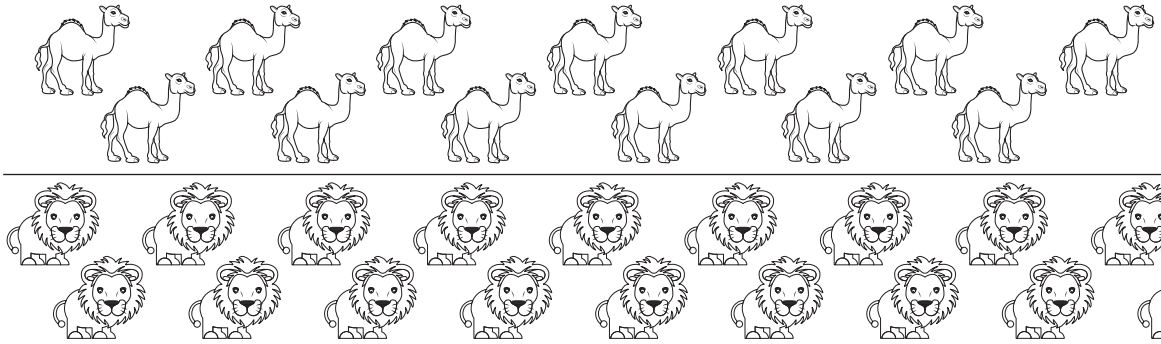




Colour the set that has less.

a



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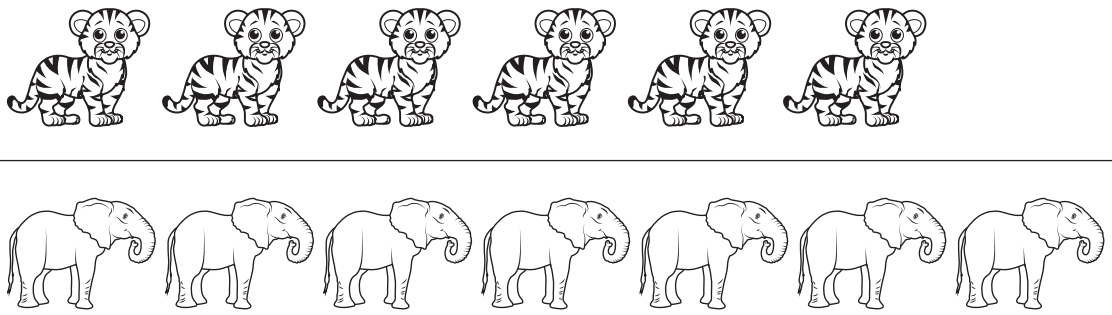

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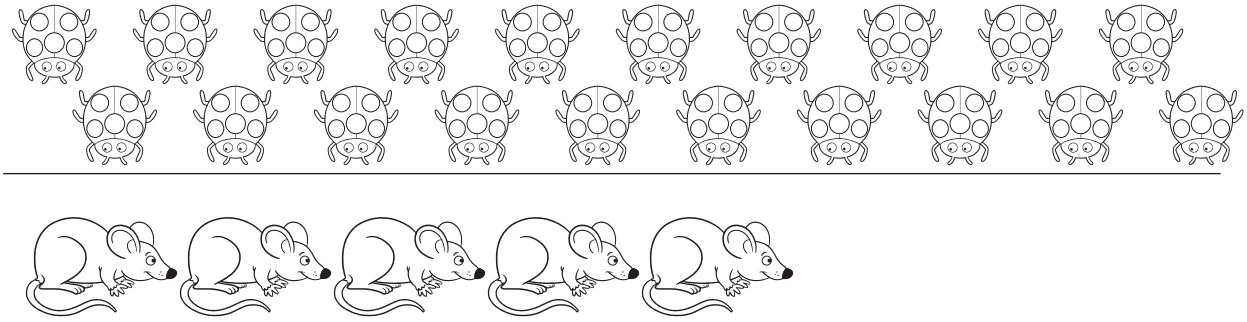

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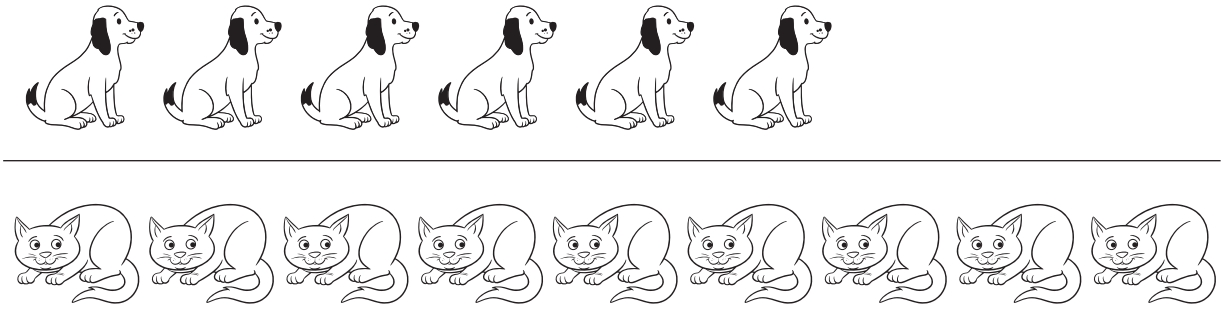

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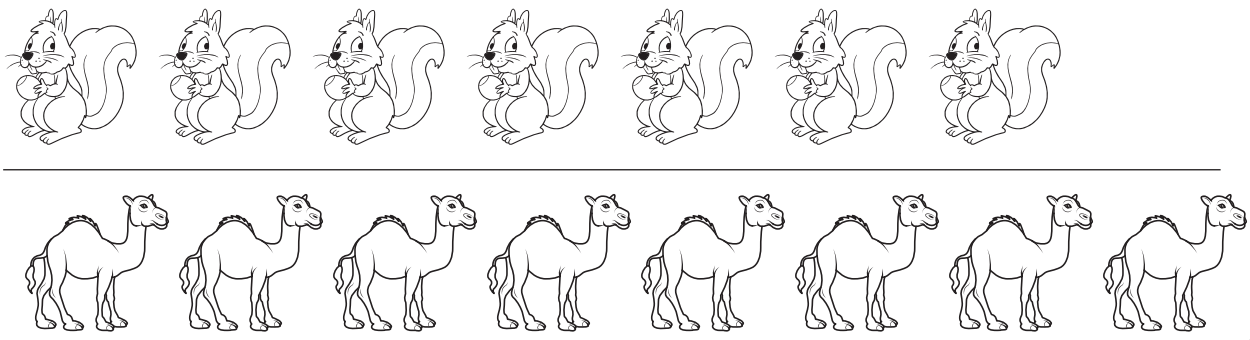

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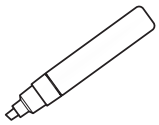
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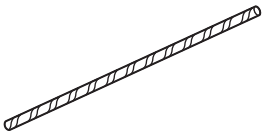
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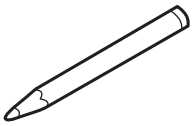
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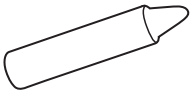
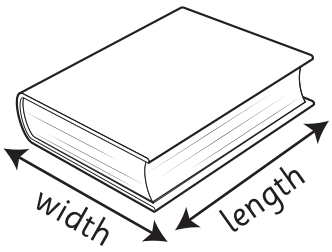
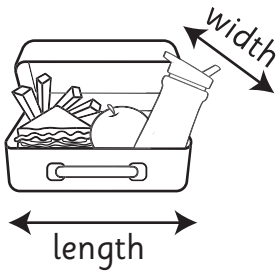

crayon

a **Maths Book**



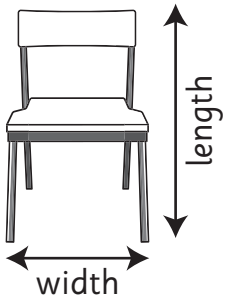
	My guess	Measurement
length:	about ☐ _____	about ☐ _____
width:	about ☐ _____	about ☐ _____

b **Lunchbox**



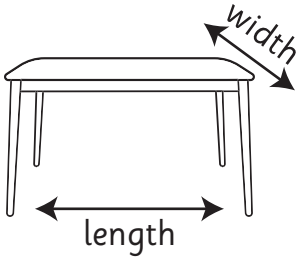
	My guess	Measurement
length:	about ☐ _____	about ☐ _____
width:	about ☐ _____	about ☐ _____

c **Chair**



	My guess	Measurement
length:	about ☐ _____	about ☐ _____
width:	about ☐ _____	about ☐ _____

d **Table**



	My guess	Measurement
length:	about ☐ _____	about ☐ _____
width:	about ☐ _____	about ☐ _____

CJ Fallon NORTHERN IRELAND

What's my number?

My units number is the same as the number of legs on two dogs.
My tens number is half of this.

I am ☐.

What's my number?

I have no units.
I am more than 20 and less than 40.

I am ☐.

What's my number?

My tens number is the same as the number of sides on a triangle.
My units number is the same as the number of sides on a square.

I am ☐.

What's my number?

I am an even number.
My number in the units place is double my number in the tens place.
I am less than 20.

I am ☐.

What's my number?

My tens number is half of 8.
My units number is the same.

I am ☐.

What's my number?

I have two digits.
My units number is double 4.
My number is less than 20.

I am ☐.

What's my number?

I am an odd number.
I have two digits.
I am more than 3 tens and 7 units and less than 40.

I am ☐.

What's my number?

My units number is double my tens number.
My tens number is less than 30 and more than 2.

I am ☐.

What's my number?

I am an odd number.
I am more than 20.
I am less than 45.
Each digit is the same.

I am ☐.

What's my number?

I am an even number.
My number in the units place is double my number in the tens place.
I am more than 30.
I am less than 40.

I am ☐.

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1. Order the numbers starting with the smallest.

(a) 42 36 18

18 ____ ____

(b) 49 27 36

____ ____ ____

(c) 25 38 29

____ ____ ____

2. Order the numbers starting with the biggest.

(a) 29 16 37

____ ____ ____

(b) 34 41 14

____ ____ ____

(c) 28 19 25

____ ____ ____

3. Write the correct numeral or number name.

(a) 32 = ____

(b) 47 = ____

(c) ____ = forty-three

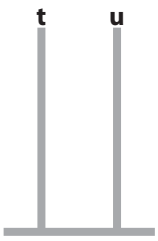
(d) 27 = ____

(e) ____ = twenty-five

(f) ____ = thirty-four

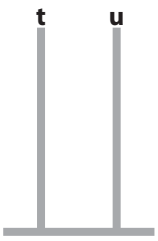
4. Draw the correct number of counters on each abacus.

(a)



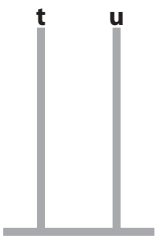
24

(b)



35

(c)



42

(d)



29

5. Draw the correct number of counters on each notation board.

(a)

t	u

36

(b)

t	u

48

(c)

t	u

27

(d)

t	u

41

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full

empty

more

less

CJFallon NORTHERN IRELAND

nearly full

nearly empty

holds more

holds less

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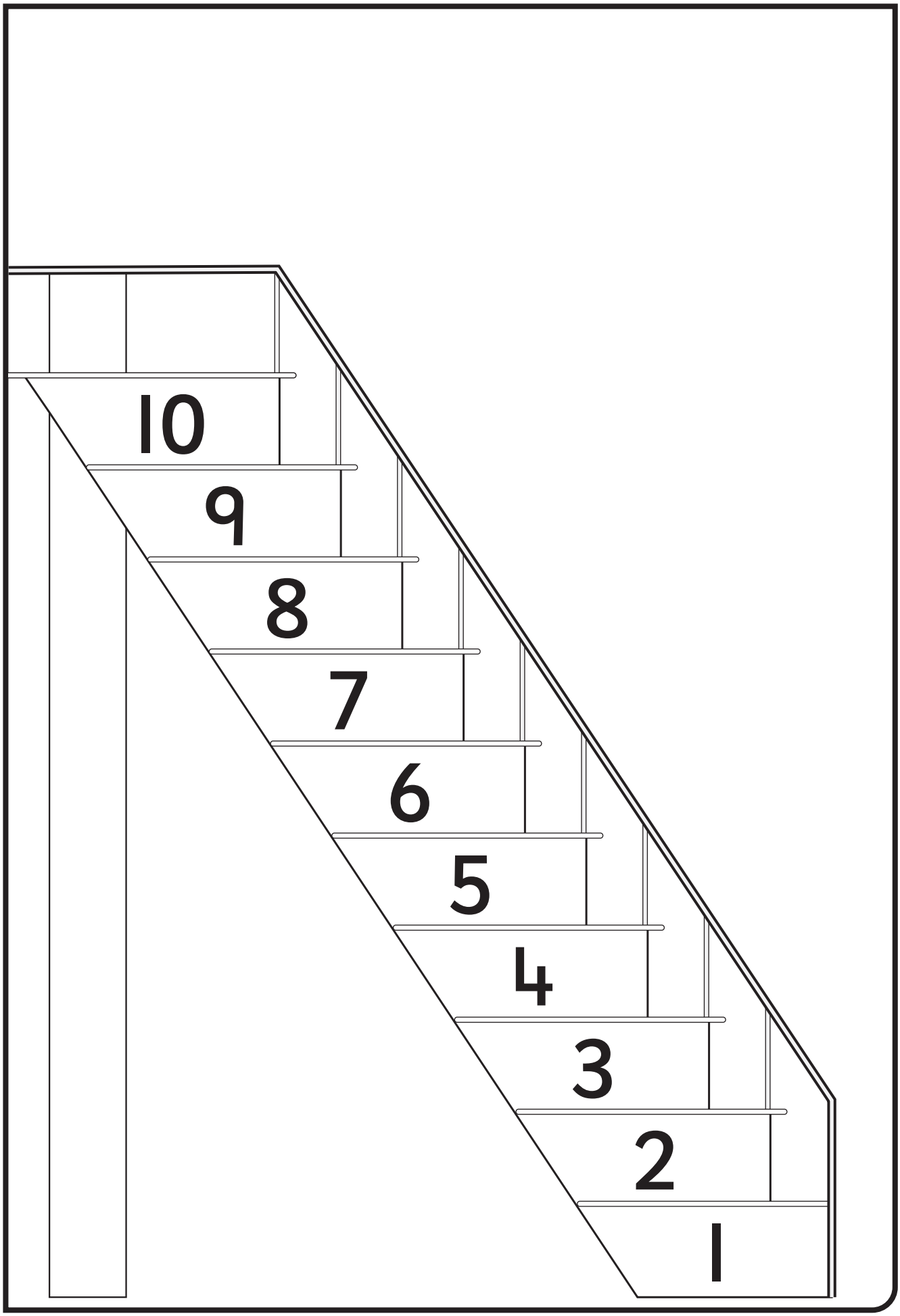
1	2
3	4
5	6
7	8
9	10



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6	5	2	3	3
4	9	7	2	10
8	11	10	12	2
9	3	6	9	2
7	4	9	4	5
6	8	5	7	10
9	7	11	10	5

9 – 6	= 3	8 – 6	= 2
7 – 5	= 2	5 – 1	= 4
8 – 3	= 5	10 – 3	= 7
9 – 5	= 4	8 – 6	= 2
9 – 7	= 2	10 – 8	= 2
9 – 8	= 1	9 – 9	= 0
6 – 6	= 0	7 – 1	= 6
7 – 2	= 5	8 – 7	= 1
10 – 0	= 10	10 – 1	= 9
8 – 2	= 6	9 – 0	= 9
6 – 3	= 3	7 – 4	= 3
10 – 2	= 8	9 – 2	= 7

Choose one of the answers to fit each question. Write.

1. 8 turtles were swimming in a pond. 5 of them got out and slept under a stone. How many were left in the pond? _____

8 – 3 = 5	5 + 3 = 8	8 – 5 = 3	8 = 5 + 3

2. A baker has 5 loaves of bread left over. He had 9 loaves earlier. How many loaves did he sell? _____

9 – 4 = 5	9 – 5 = 4	9 = 5 + 4	4 + 5 = 9

3. 3 planes have taken off from the runway. There had been 9 planes there. How many planes remain on the runway? _____

9 – 6 = 3	6 + 3 = 9	9 – 3 = 6	9 = 6 + 3

4. 11 horses finished a race. 17 horses had started the race. How many horses didn't finish the race? _____

17 – 6 = 11	11 + 6 = 17	17 – 11 = 6	17 = 11 + 6

5. 15 horses were supposed to run in the next race also. Only 11 jockeys turned up. How many more jockeys are needed? _____

15 – 4 = 11	11 + 4 = 15	15 – 11 = 4	4 + 11 = 15

6. Two of these answers are incorrect. Circle them.

11 + 7 = 17	19 – 12 = 7	15 = 11 – 4	6 + 10 = 16

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0	2	4		8	10			16		20	22		26
6	8	10		14		18		22		26	28		32
	4	6		10	12			18		22	24	26	28
8	10		14	16	18		22			28	30		34
10	12	14	16		20		24		28	30		34	
30	28	26		22	20			14		10	8		4
26	24		20		16	14		10		6	4		0
34	32	30		26	24			18		14	12	10	

0	5	10		20	25			40		50
0		10	15		25	30				
	5	10			25				45	
0	5							40		50
0										
50	45	40		30			15			0
50	45		35		25					0
50		40		30		20				

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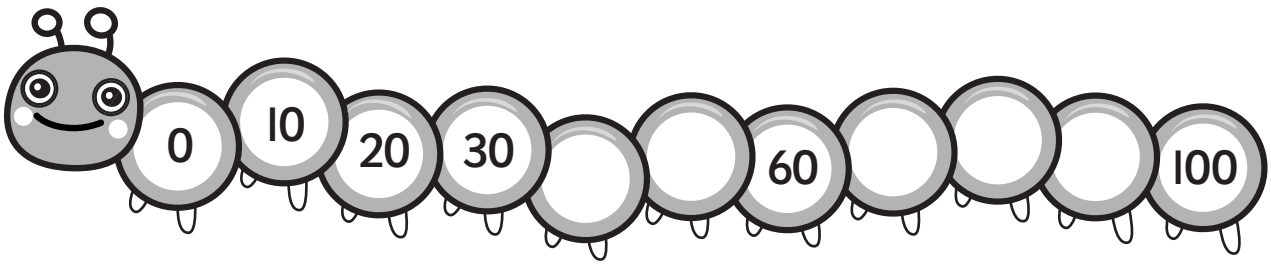

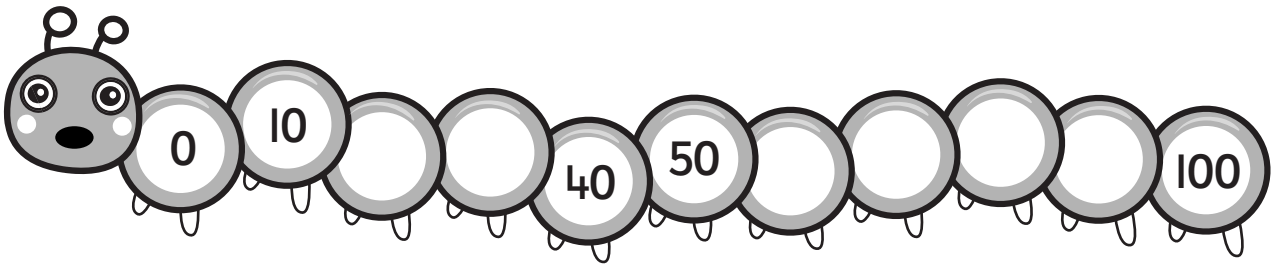

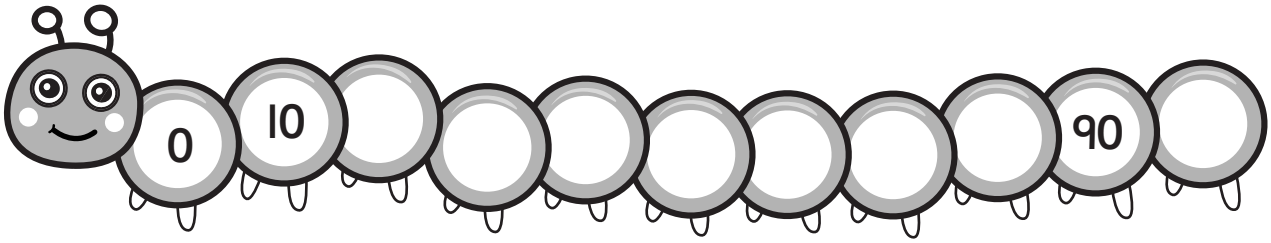

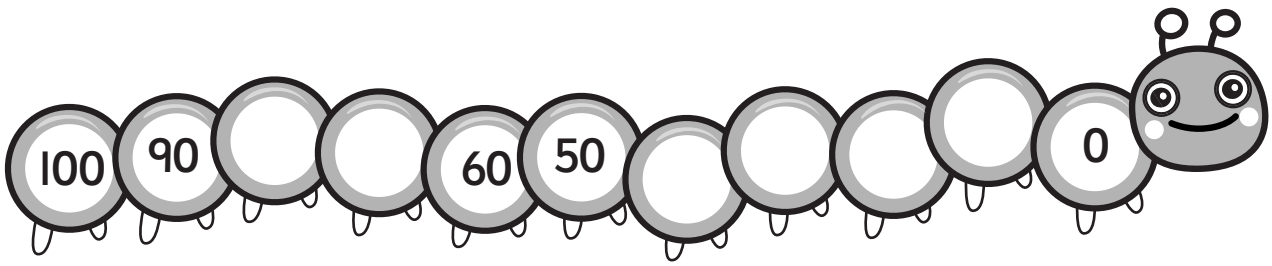

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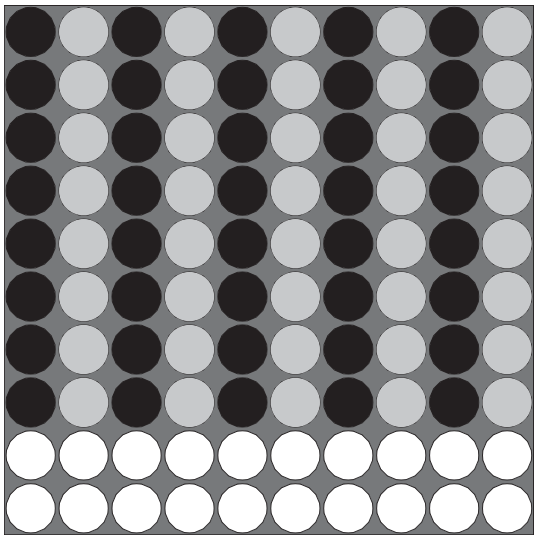
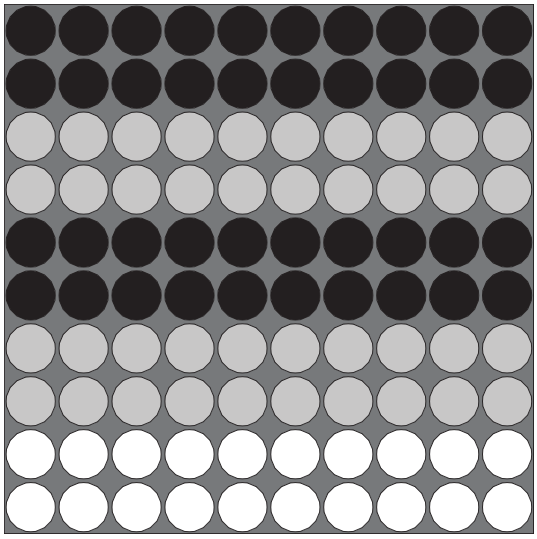
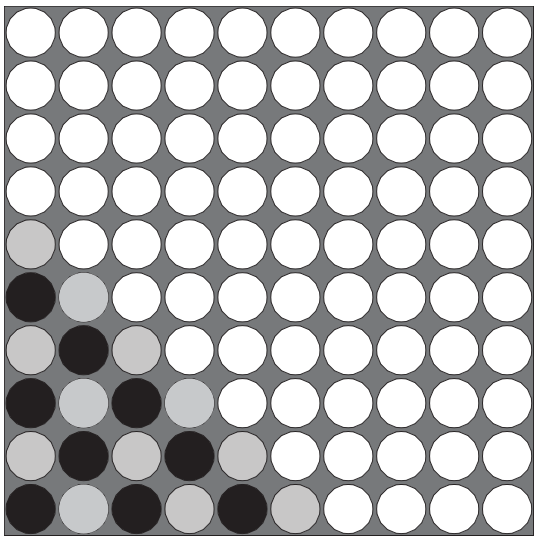
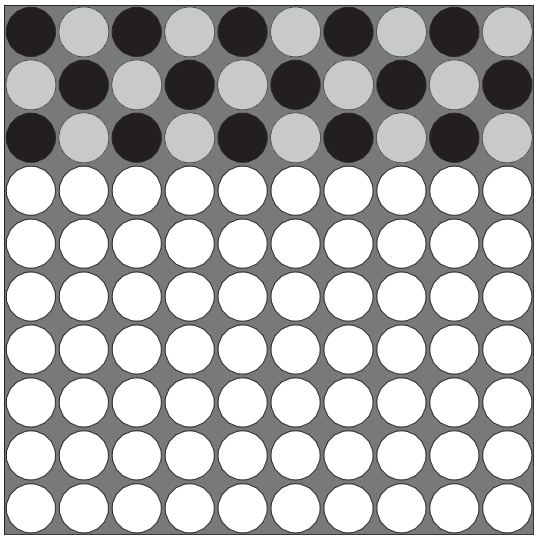
Pick your own colours to complete these patterns e.g. instead of light grey and black, you could use red and green.

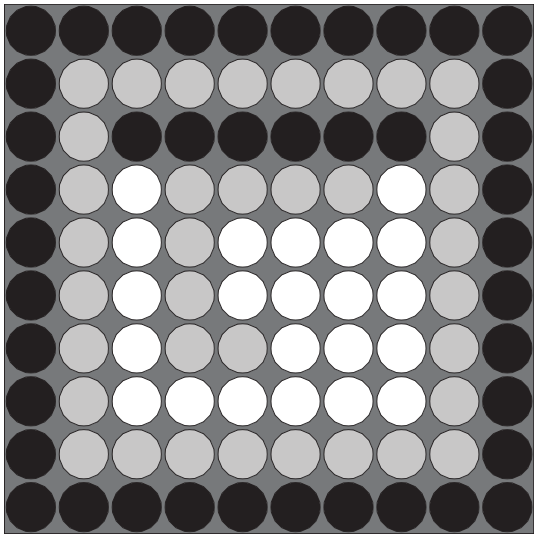


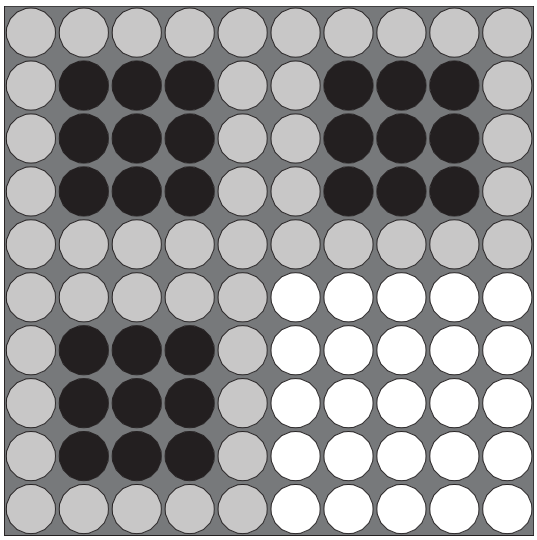


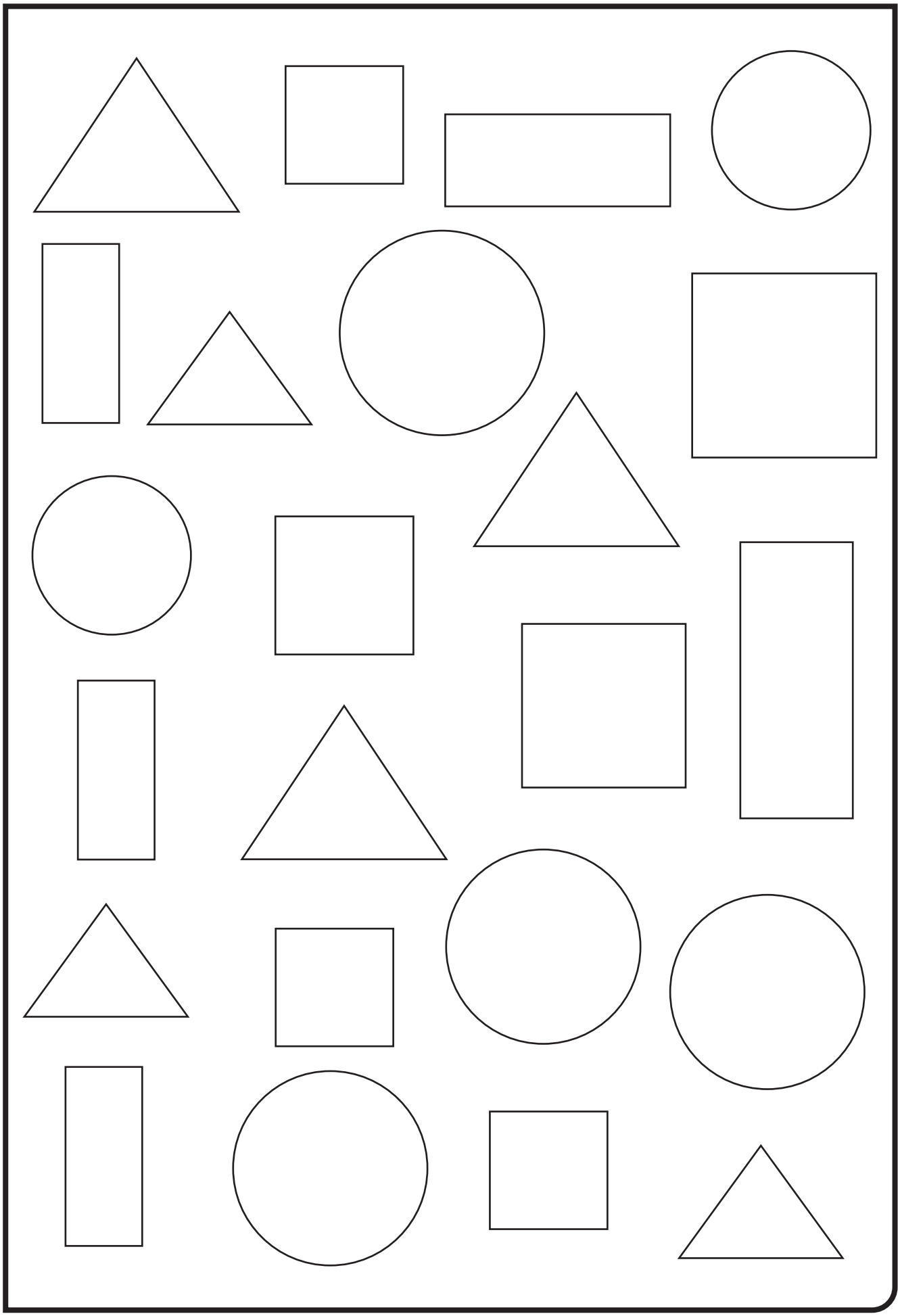


Pick your own colours to complete these patterns e.g. instead of light grey and black, you could use red and green.









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21	31	41	49
22	32		
23	33	42	47
24	34		
25	35	43	48
26	36		
27	37	44	49
28	38		
29	39	45	50
30	40		

CJFallon NORTHERN IRELAND

What's my number?

I have no units.
I am an even number.
I am less than 40.
I am greater than 20.

I am ☐.

What's my number?

My units number is odd.
My tens number is even.
My units number is greater than 7.
My tens number is less than 3.

I am ☐.

What's my number?

I have four tens.
I have half as many units as tens.

I am ☐.

What's my number?

I have three tens.
I have some units.
My units are less than 8.
My units are greater than 6.

I am ☐.

What's my number?

I have some units.
I don't have 8 units.
I have half of that number of units.
The number of tens I have is the same as 20 units.

I am ☐.

What's my number?

I have some units.
I don't have 10 units.
I have half of that number of units.
I have 3 tens.

I am ☐.

What's my number?

I am an odd number.
I have two digits.
I am more than 2 tens and 8 units and less than 30.

I am ☐.

What's my number?

I am an even number.
I have two digits.
Both digits are the same.
I am more than 20 and less than 40.

I am ☐.

What's my number?

I am 3 tens and 14 units.

I am ☐.

What's my number?

I am 2 tens and 26 units.

I am ☐.

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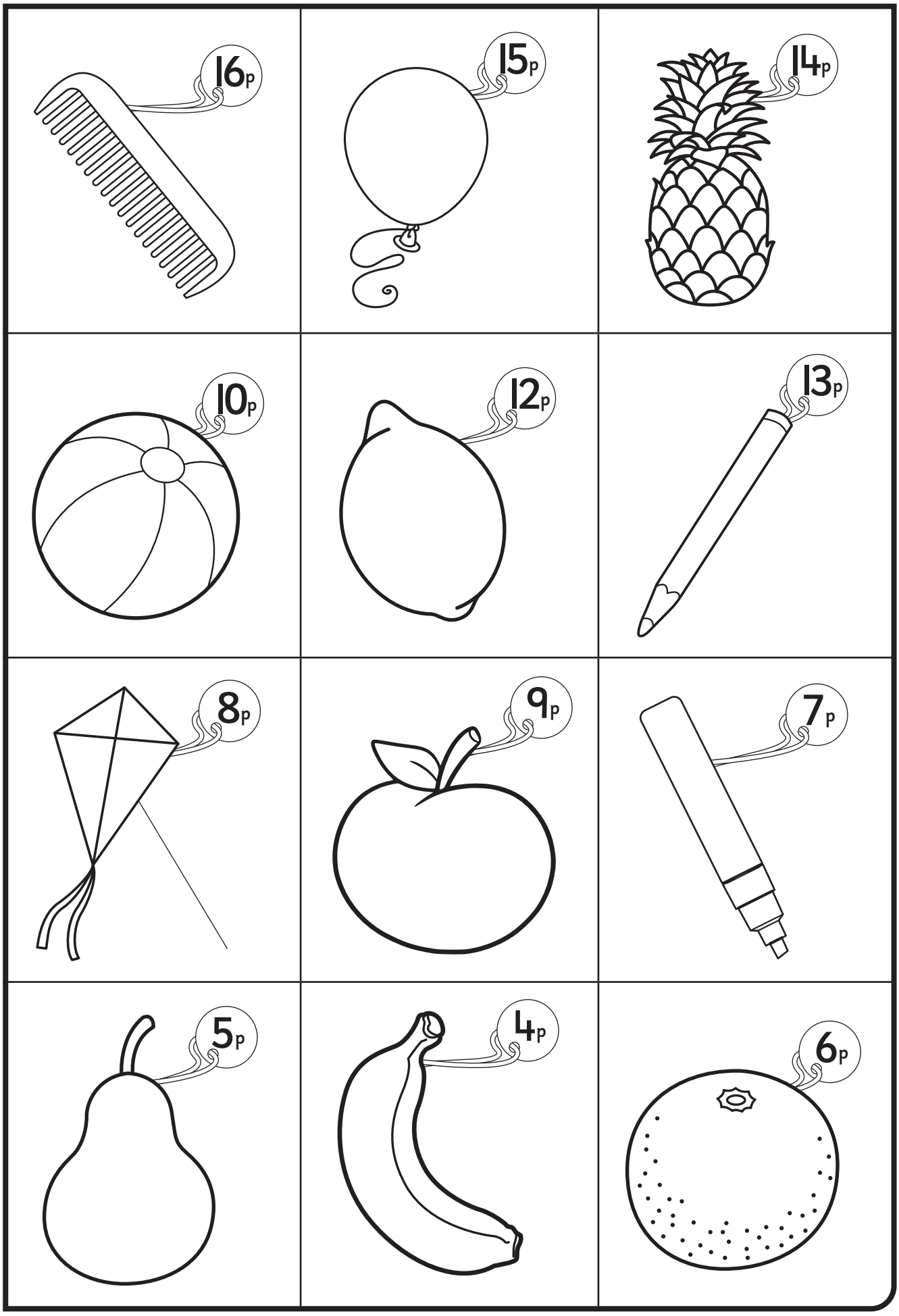

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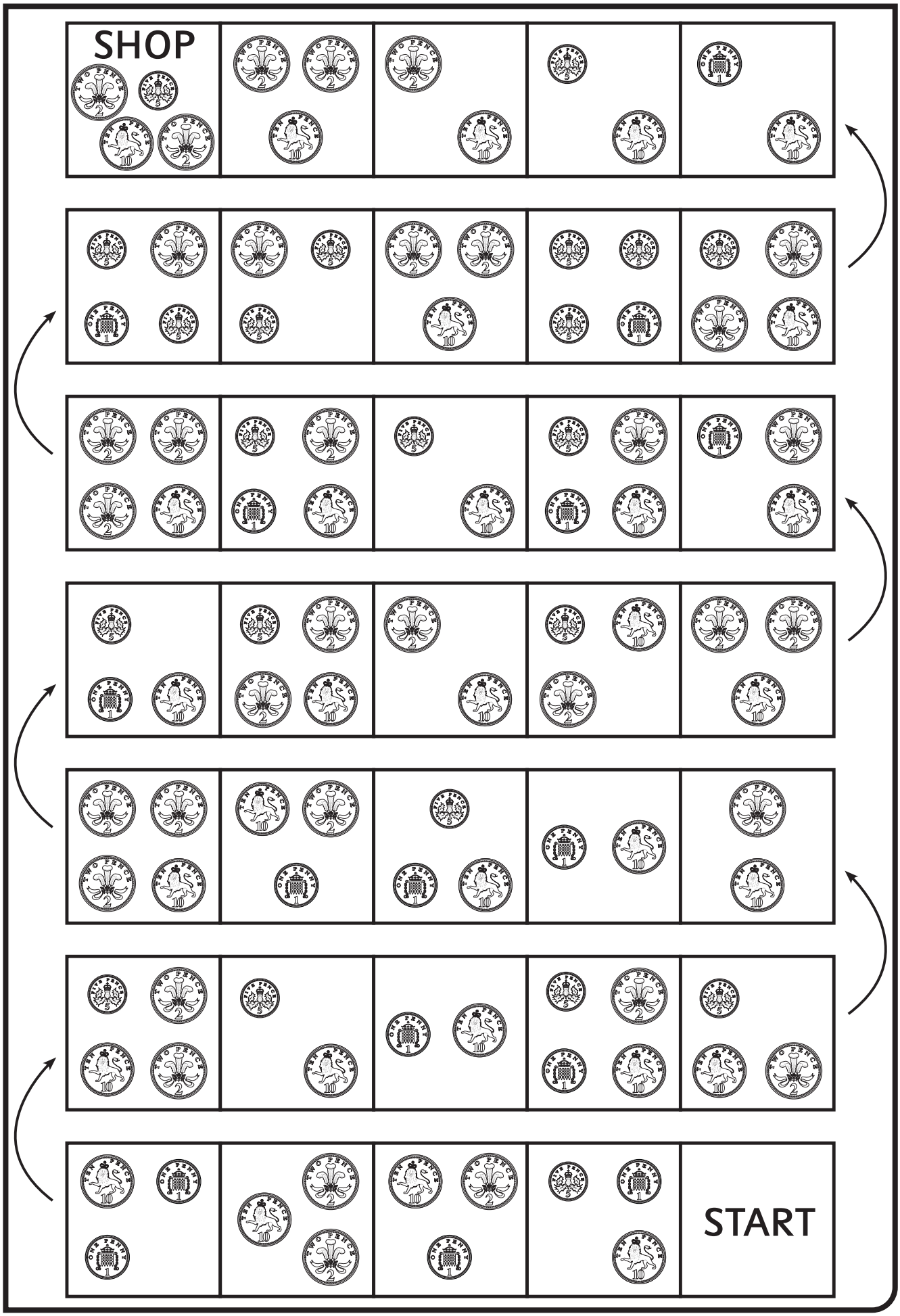


CJ Fallon NORTHERN IRELAND

11p	12p	13p
14p	15p	16p
17p	18p	19p
Go forward 2 spaces.	Miss a go.	Go back 2 spaces.

heavy

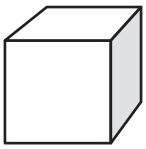
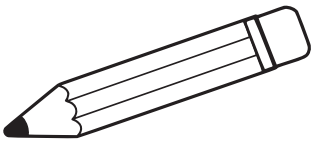
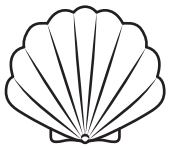
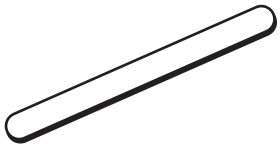
heavier

heaviest

light

lighter

lightest

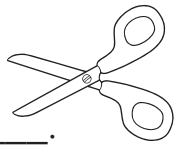
a

It takes ☐ _____ to balance the _____.



b

It takes ☐ _____ to balance the _____.



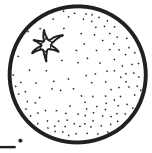
c

It takes ☐ _____ to balance the _____.



d

It takes ☐ _____ to balance the _____.



e

It takes ☐ _____ to balance the _____.



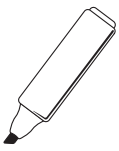
f

It takes ☐ _____ to balance the _____.



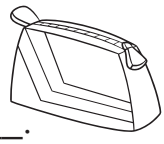
g

It takes ☐ _____ to balance the _____.



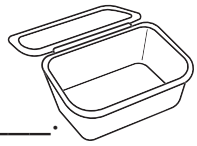
h

It takes ☐ _____ to balance the _____.



i

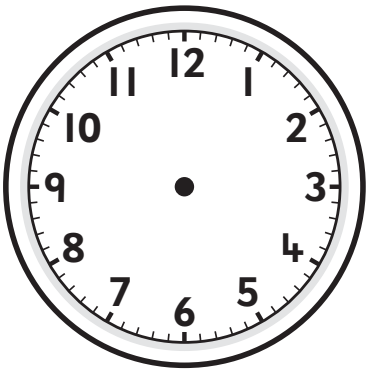
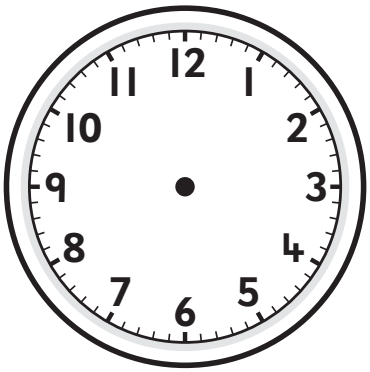
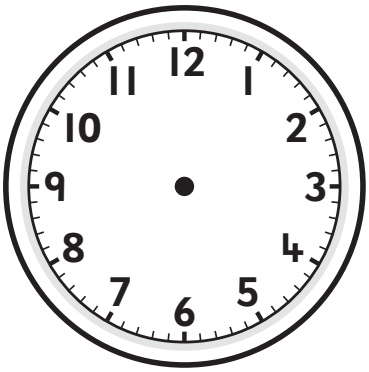
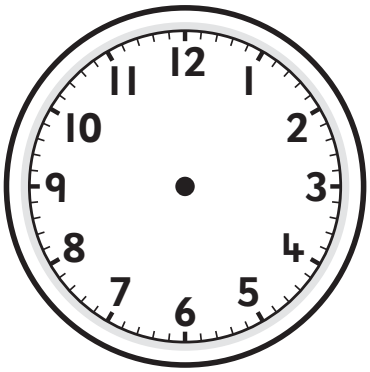
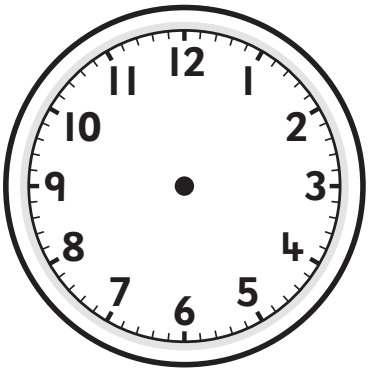
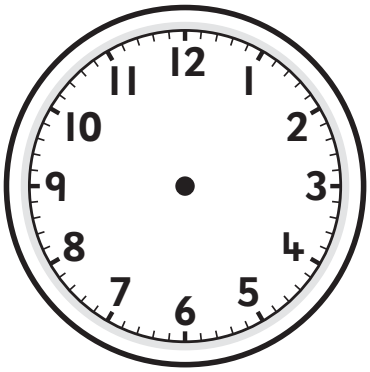
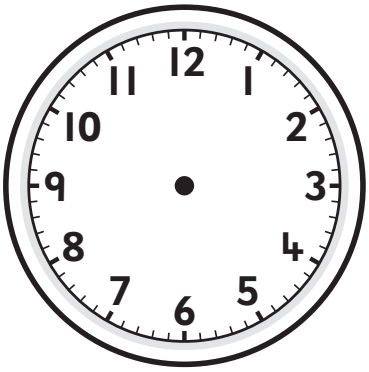
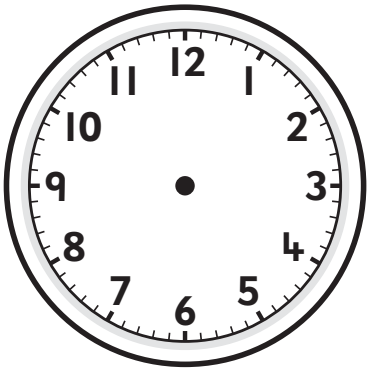
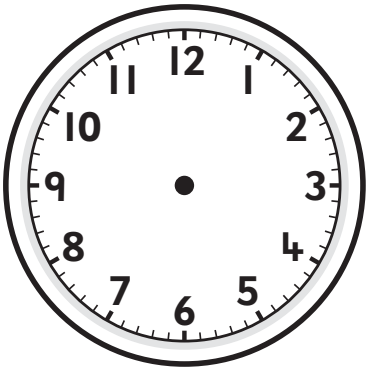
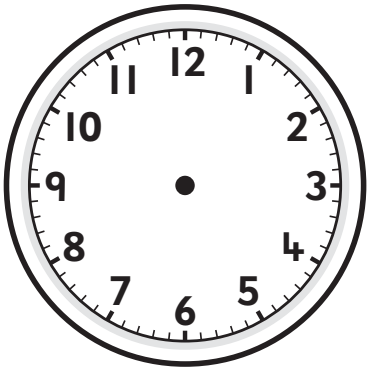
It takes ☐ _____ to balance the _____.



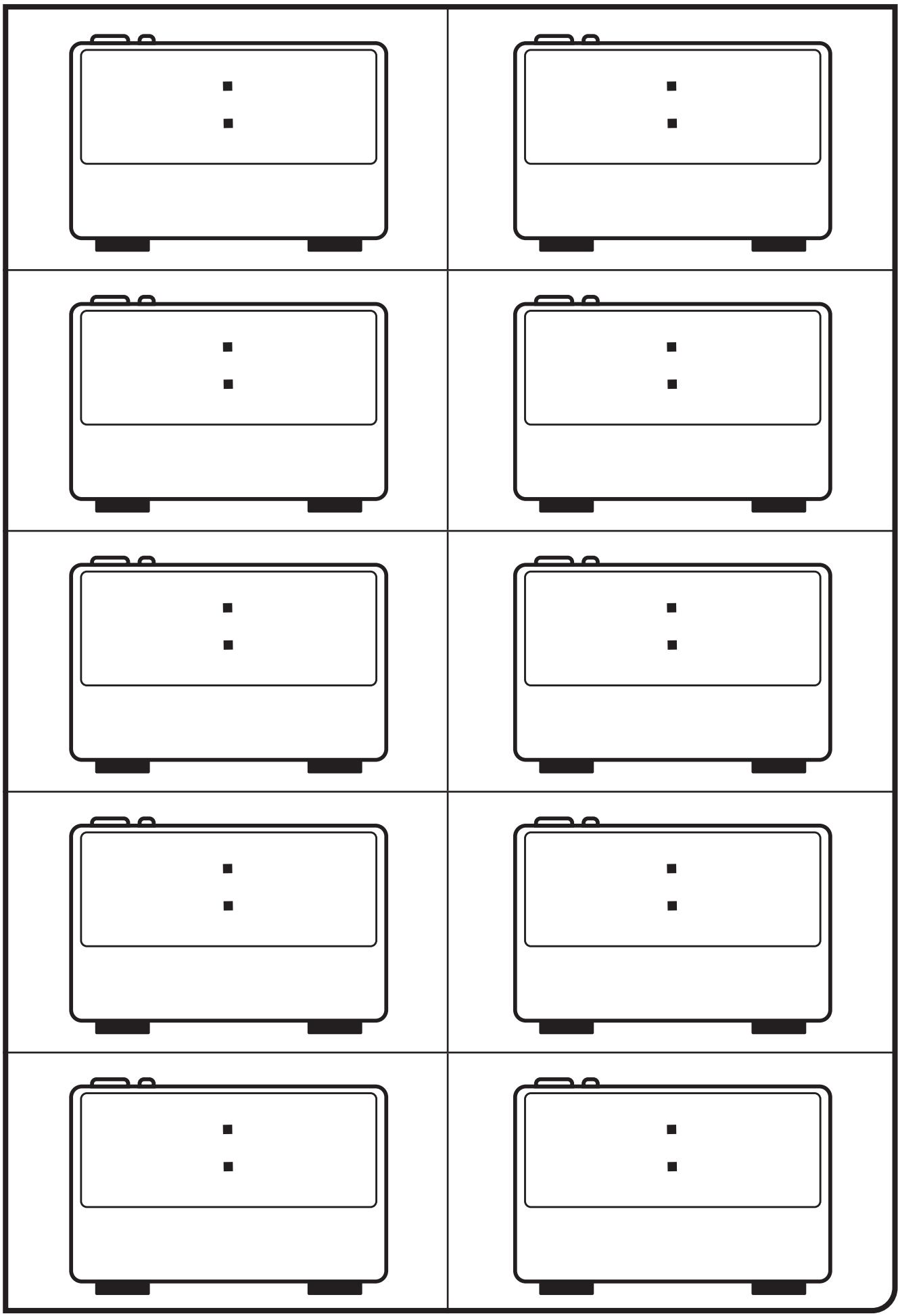
j

It takes ☐ _____ to balance the _____.



CJ Fallon NORTHERN IRELAND



I wake up in the morning.



I eat my breakfast.

I go to school.

We have small break in school.

We have big break in school.

School finishes.

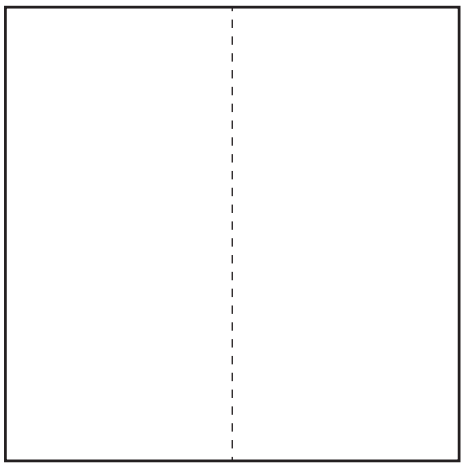
I eat my dinner.

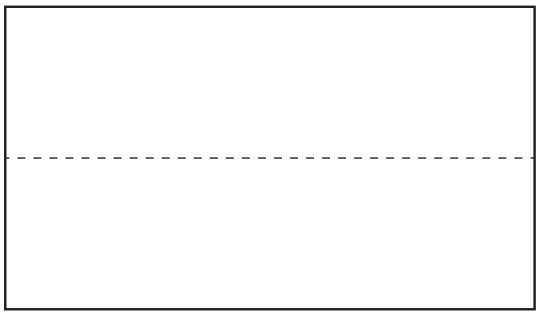
I do my homework.

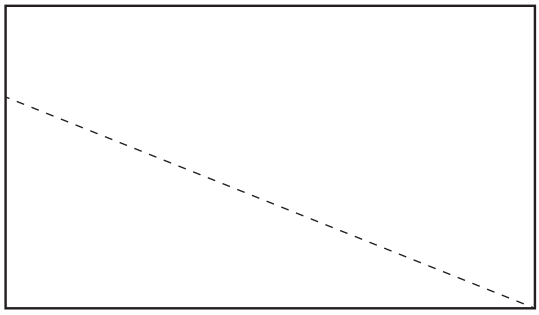
Fractions $\frac{1}{2}$: Loop Cards

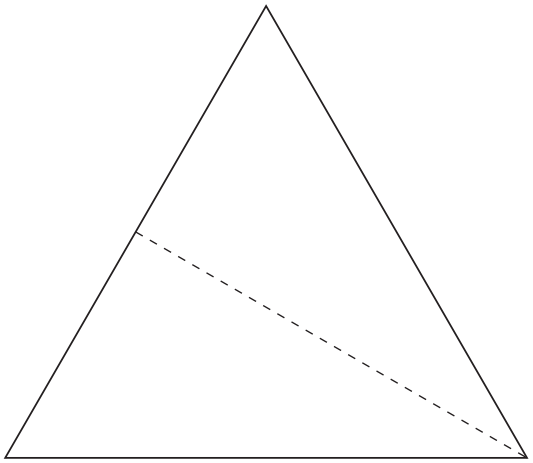
START	**Clue:** $\frac{1}{2}$ **of 6**
I have 3.	**Clue:** $\frac{1}{2}$ **of 14**
I have 7.	**Clue:** $\frac{1}{2}$ **of 10**
I have 5.	**Clue:** $\frac{1}{2}$ **of 20**
I have 10.	**Clue:** $\frac{1}{2}$ **of 2**
I have 1.	**Clue:** $\frac{1}{2}$ **of 12**
I have 6.	**Clue:** $\frac{1}{2}$ **of 18**
I have 9.	**Clue:** $\frac{1}{2}$ **of 4**
I have 2.	**Clue:** $\frac{1}{2}$ **of 16**
I have 8.	**Clue:** $\frac{1}{2}$ **of 8**
I have 4.	**FINISH**

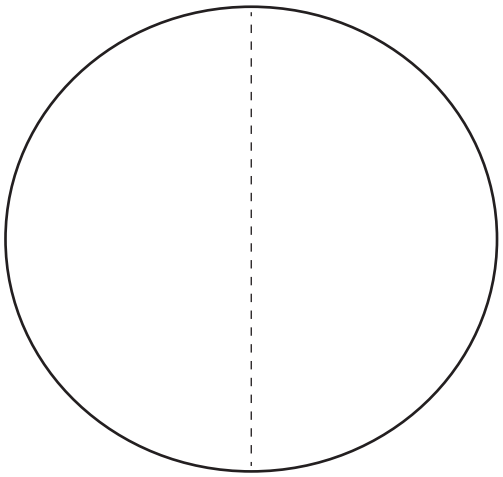
Sort the shapes into two piles – symmetrical and not symmetrical.

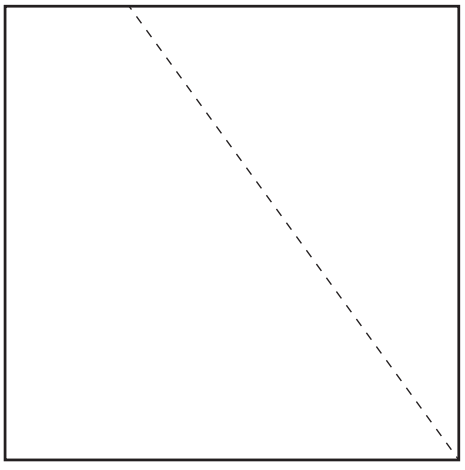


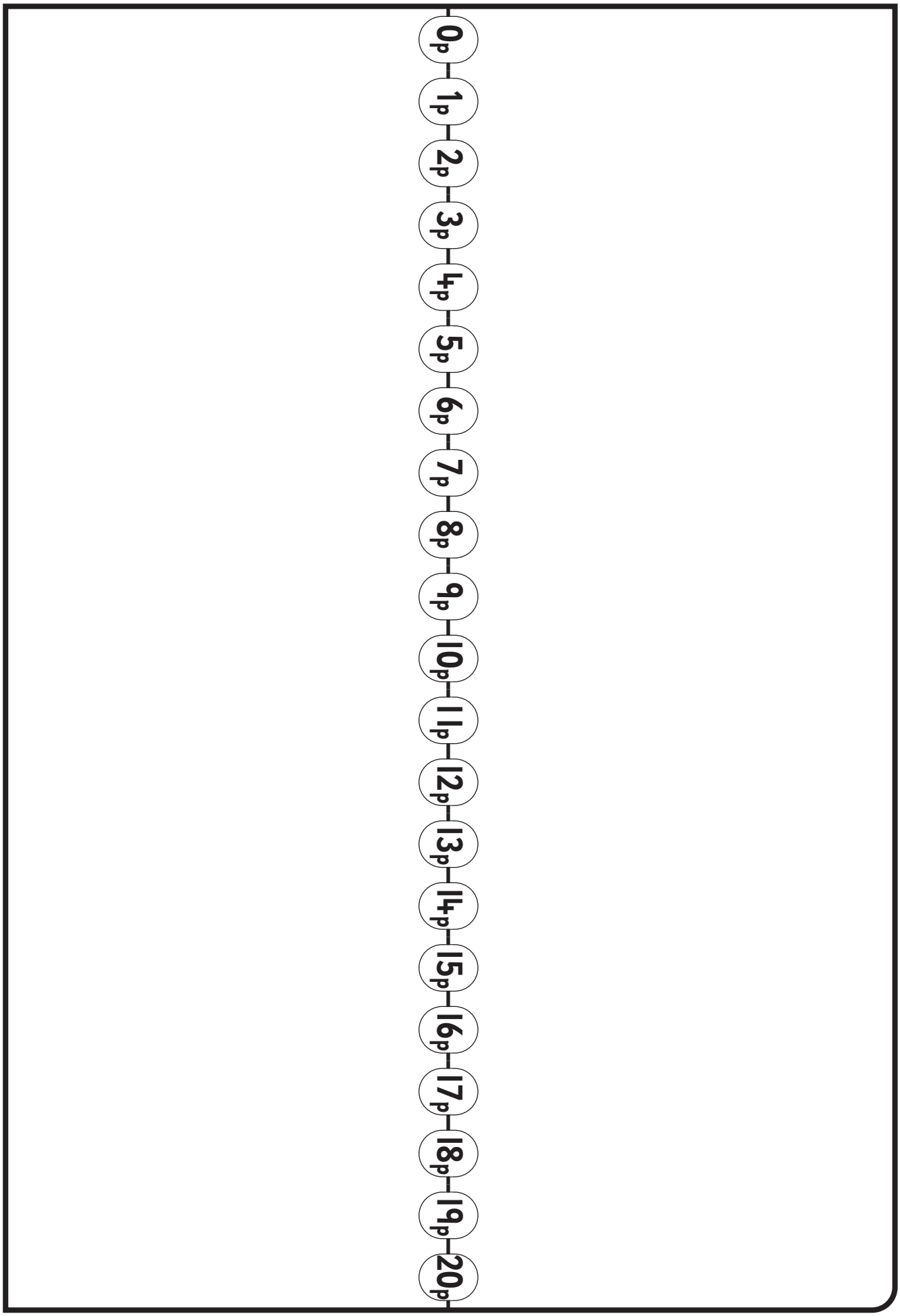












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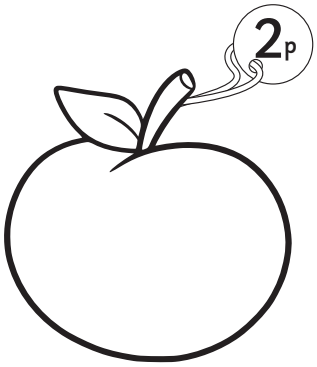

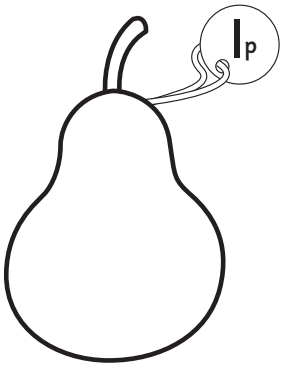

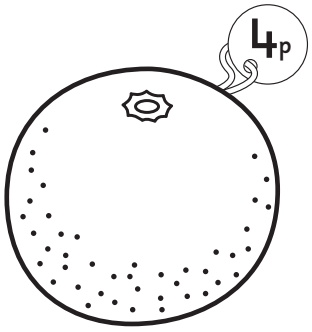

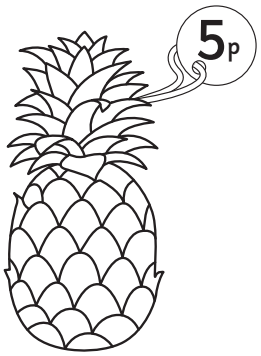

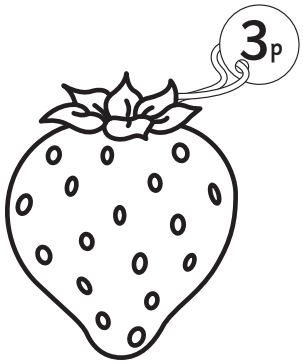

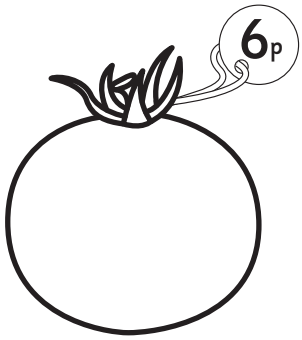

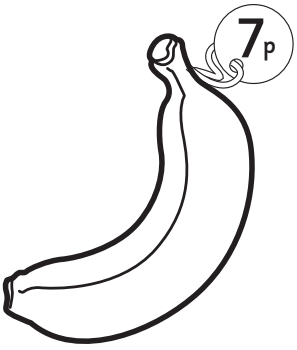

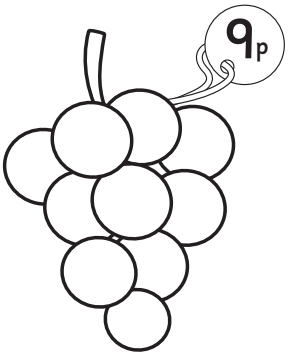

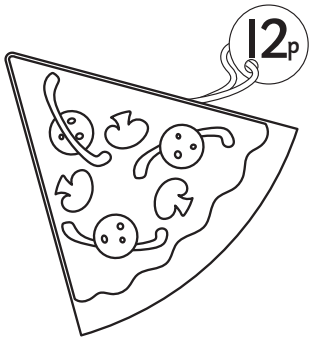

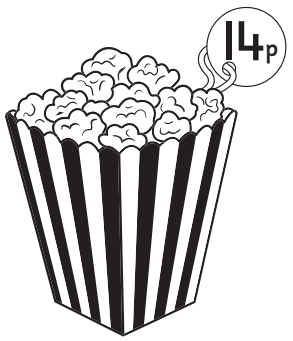

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New Busy at Maths

Year 2

Home Support Sheets



ALIGNED WITH THE Northern Ireland Primary Mathematics and Numeracy Curriculum 2007

This week your child will be revising the numerals 0–10 in Chapter 1 of *New Busy at Maths – Year 2*. These numerals were taught in *New Busy at Maths – Year 1*.

Count and Clap!

Ask your child to clap their hands as you count together from 0 to 10. Start slowly so your child can match one clap to each number.

- Say a number and clap that many times (for example, say "3" and clap three times).
- Ask your child to copy you.
- Swap roles and let your child choose a number between 0 and 10 for you to clap.
- Try mixing it up with different actions such as jumps, stomps, or taps on the table.
- **Extra challenge:**
  Place number cards (0–10) on the floor. Ask your child to pick a card and then do that many claps, jumps, or hops.

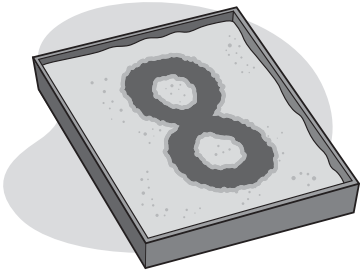
Maths eyes

Ask your child where he/she can see the numerals 0–10 around them: lanes in a race, scoreboards, car registration plates, calendars, buses, mobile phones, doors, calculators, money, safes, cooker dials, prices in the supermarket, on horses in a race, cubicles in a hospital, etc.

Drawing the numerals 0–10

Ask your child to draw the numerals (numbers) between 0 and ten (10):

- in the air
- on your hand
- on your back
- on your table
- using playdough
- in a sandbox.



Scavenger hunt

Ask your child to walk carefully around the house to find:

- 9 crayons, markers or spoons.
- 6 cups, candles or night lights
- 3 mugs, books or comics
- 1 paperclip, fork or saucer, etc.

Snack-time helper

When preparing a snack, ask your child to count out the number of items you need — for example 8 grapes, 6 crackers, or 10 carrot sticks. Use only the exact number required.

Listen and count!

Have a small bucket or other receptacle. Ask your child to turn around and to listen to the coins (up to ten) as you drop them in the bucket. He/she must hold up that number of fingers to show how many were dropped in.

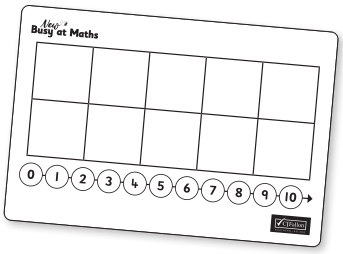
What's my number?

Have your child stand with his/her back to you. Trace one of the numerals 0–10 on his/her back.

The object of the game is for your child to guess what the number is. When your child answers correctly, he/she gets the opportunity to trace one of the numerals 0–10 on your back and you have to say which number it is.

Showing 10 on the ten frame

Your child has a ten frame – a white, plastic sheet with ten boxes. He/she will need 10 counters. Ask your child to show ten (10) of these counters on the ten frame (by placing one counter in each of the ten squares).



Variation: Hold up different sets to ten of anything you have to hand, e.g. spoons, cups, forks, pencils, place mats, apples, pears, bananas. As you do so, ask your child to place that number of counters on the ten frame.

Rainbow colouring 0–10

Draw the numerals 0–10. Ask your child to rainbow colour the numerals using different colours. This activity simply gives your child practice revising how to form the numerals 0-10.

This week your child will revisit the = (equals) and + (plus) signs in Chapter 2 of *New Busy at Maths – Year 2*. These signs were introduced in Chapter 20 *New Busy at Maths – Year 1*.

Balance the scales

Give your child a selection of objects (e.g. marbles, blocks, paperclips, toy cars, glue sticks) and a bucket balance – a simple balance. You and your child will have fun balancing **like**-objects. For example, you could place 4 marbles into one of the buckets. Your child would place another 4 marbles in the other bucket to balance the two sides. Encourage your child to use the correct language, e.g. 'The two buckets are equal, are not equal.'

To extend the activity, you and your child could investigate unlike objects, e.g. How many marbles are equal in weight to a glue stick, pencil case, mug or water bottle?

Equal grabs!

Place an empty plate in front of your child and another one in front of yourself. Give your child a bag of 10 similar objects (e.g. Unifix cubes, attribute bears, Lego bricks, counters, shells, buttons, marbles, markers).

Ask your child to close his/her eyes and 'grab' a handful of the objects from the bag and place them on a plate, saucer. You must now 'grab' a handful from the bag and place them on your plate or saucer. The two of you must compare the two grabs. Are they equal or not equal?

To prove or justify the result, place the amounts from the two grabs in one-to-one correspondence (one above the other) on the table where your child should clearly see if the sets are equal.

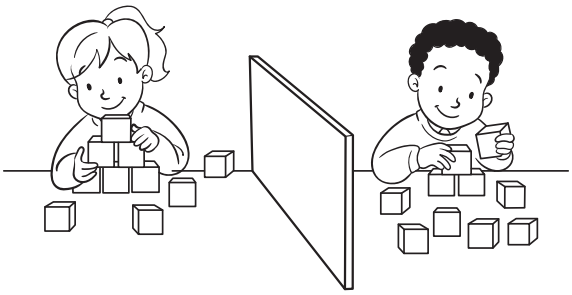
Matching playing cards

Give your child a pack of playing cards with the cards numbered 1–10. To start, ask your child to match the cards that have an equal number of dots, e.g. he/she matches the 1s, 2s, 3s, 4s, 5s, etc.

Extension: Play the game 'Snap' where each player places a card in turn in the centre of the table. Play continues and when matching, equal cards are played, a player calls out 'Snap!' The player with the most cards at the end of the game, wins.

Barrier game towers

Keep up to 10 similar objects for yourself and give your child up to 10 similar objects (e.g. cubes, attribute bears, Lego bricks, counters, shells, buttons, marbles, markers). Place a barrier between the two of you (e.g. a lunch box or schoolbag). On your command, both of you must build a tower using as many of the 10 items as you want. On your instruction, after about 15–20 seconds, you must both reveal your towers and compare them. Are they equal or not equal?



Extension: You could stretch your child's understanding by asking: 'How many more cubes do I/you need for the towers to be equal?

Maths chat

Show your child the plus (+) and equals (=) symbols and talk about what they mean. Using the number sentence 2 + 3 = 5 as an example, encourage your child to read and say it in a variety of ways:

- 2 ***and*** 3 make 5
- 2 ***plus*** 3 make 5
- 2 ***plus*** 3 equals 5
- When I ***add*** 2 and 3, I get 5, etc.
- If I have 2 and ***add*** 3 more, I have 5 altogether.

Encourage your child to continue exploring addition number sentences for numbers up to 10 and to describe them in a variety of ways.

Are these sets equal?

Place two plates, paper plates, bowls or two sheets of A4 paper on the table. Have a number of objects (e.g. cubes, attribute bears, Lego bricks, counters, shells, buttons, marbles, markers or anything that is to hand). Place 3 counters on one plate and 4 on the other. Ask: 'Are these sets equal?'

This can be done with a variety of numbers, e.g.

- 2 and 1
- 2 and 2
- 4 and 1
- 4 and 2
- 3 and 1
- 1 and 3

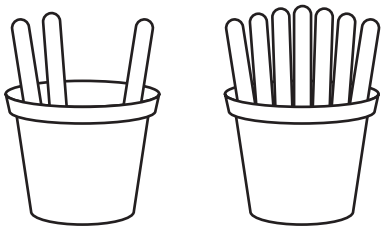
This week your child will revisit combining (adding, e.g. 2 + 8 = 10) within 10 in Chapter 3 of *New Busy at Maths – Year 2*.

Cup combining

Place two cups or mugs and 10 lollipop sticks (or any other item that will fit in the cups) on the table. Share some (or all) of the lollipop sticks between the two cups in any array you want, e.g. 3 in the first cup and 7 in the second. Ask your child to call out the number sentence, e.g. '7 plus 3 equals 10.' You can do this with a number of questions as in the block combining activity.

Extension: Encourage your child to write the number sentence on his/her individual whiteboards or in a copybook, for example: 7+3=10.

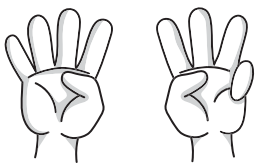
Combining sets



Combining sets is another name for addition or adding groups of numbers.

Game 1: Rock, paper, scissors, add!

Play this fun game with your child. Both of you face each other. Hold out one fist and chant 'Rock, paper, scissors, add!' On the word 'add', both of you must show any number of fingers from 1 to 5, e.g. four fingers and three fingers. Add the total and ask your child to write the number sentence, 4 + 3 = 7. Play this game a number of times with your child.



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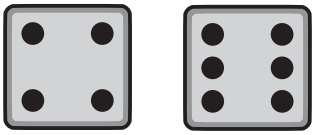
Game 2: Combining dice numbers

Give your child two dice. Ask them to throw or roll the dice. Then ask them to add the totals – if they throw more than a total of 10, they must throw the dice again. Encourage your child to write the number sentence on a piece of paper. For example, if they roll a 4 and a 6, they write: 4 + 6 = 10. Play this game a number of times with your child.



Game 3: Combining numbers using cubes

Give your child up to 10 coloured cubes, counters, buttons or beads (any small items will do) to make a sum. Ask your child to make the story of ten using all the number bonds, e.g. 0 + 10 = 10; 1 + 9 = 10, etc.

Game 4: Combining numbers on the ten frame

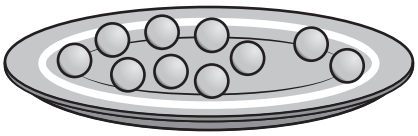
Use the ten frame in your child's schoolbag. Give them up to 10 coloured counters, buttons or beads (any small items will do) to make a sum. For example: five red and four green counters or five buttons and four beads. Ask your child to combine (add) the two numbers, e.g. 5 + 4 = 9. Call out another sum, e.g. 6 + 3. Your child should place six of one item (buttons) and three of another item (beads) on the ten frame. Ensure your child fills in the items on the ten frame starting from the top left.

This week your child will revisit partitioning (splitting, *e.g.* 10 = 2 + 8) within 10 in Chapter 4 of *New Busy at Maths – Year 2.*

Plate partitioning

Place a plate, paper plate or sheet of paper on the table in front of your child. Ask him/her to share 10 counters in as many different ways as possible.

When you have shared out the counters, ask your child to call out the number sentence, *e.g.* 10 = 8 + 2.



This activity can be done to show a variety of number sentences, *e.g.*

- 4 = 1 and 3
- 4 = 2 and 2
- 4 = 3 and 1
- 5 = 4 and 1
- 5 = 3 and 2
- 5 = 1 and 4

Sock Partitioning

Place up to 10 socks in a pile in front of your child.

Ask your child to split the socks into two groups (you can use two spaces on the table or floor).

Each time they split the socks, ask them to say the number sentence, *e.g.* 10 = 6 and 4.

Encourage them to find as many different ways as possible to make 10, for example:

- 10 = 1 and 9
- 10 = 2 and 8
- 10 = 3 and 7
- 10 = 4 and 6
- 10 = 5 and 5

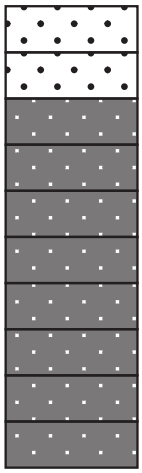
Try other totals up to 10 to practise different number sentences.



Towers partitioning

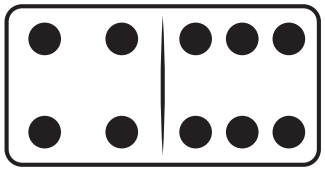
Give your child 10 red and 10 blue Lego bricks (any 2 colours will do). Ask your child to show different ways of making a tower of 10 (*e.g.* 10 red and no blue = 10 + 0, or:

- 10 = 1 red + 9 blue
- 10 = 2 red + 8 blue
- 10 = 3 red + 7 blue
- 10 = 4 red + 6 blue
- 10 = 5 red + 5 blue
- 10 = 6 red + 4 blue
- 10 = 7 red + 3 blue
- 10 = 8 red + 2 blue
- 10 = 9 red + 1 blue
- 10 = 10 red + 0 blue



Game: Domino tens

Give your child a box of dominoes. Ask them to find all the dominoes that have a total of 10 only. Ask them to pick any number from the box of dominoes so they understand all the numerals/numbers 0–10, *e.g.* 7, 9, 6, 3, 5, etc.



Partitioning sets

Partitioning sets is where you place some buttons, counters, etc. on the table and use a pencil or straw to divide the set of items into two sets.

Game: Give your child up to 10 counters and a paper plate or A4 sheet. Ask them to place a pencil down the middle of the plate or A4 sheet. Ask them to share the counters between the two sides of the plate, *e.g.* 7 = 4 + 3. Make the work more interesting by taking one suit from a deck of cards with the numbers 2 to 10 only. Ask your child to pick a card. If they pick, *e.g.* 8, have them share out the eight counters. Then ask them to call out the number sentence, *e.g.* 8 = 5 + 3; 8 = 6 + 2, etc. See how many ways they can share them out!

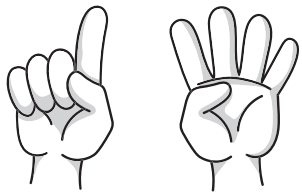
This week your child will be introduced to Numbers 10-15 in Chapter 5 of *New Busy at Maths – Year 2.* Ensure your child is able to count forwards and backwards to 15.

Game: Arms up, arms down!

Play this game with your child. Put your/their arms up in the air when you say 1 and put your/their arms down when you say 2. Put your/their arms up in the air when you say 3 and put your/their arms down when you say 4, etc. Continue until you reach the target number of 15. When you are happy they can count forwards, play the game by starting at 15 and counting down, that is, put your/their arms up in the air when you say 15 and put your/their arms down when you say 14, etc.

Three-handed teen numbers

Work with your child to make the numbers 11–15 with your hands. Hold up both hands to make 10 with your fingers. Ask your child to hold up any number of fingers between 1 and 5 to make the units. Ask them to show 14. Take a photograph, if possible, of some of the representations of the numbers 11–15 and refer to them now and again. Ask your child to also make numeral cards to go with each representation or write the numerals on pieces of paper, cardboard or Post-it notes as they make each number.



Number strips 0 to 20

Ask your child to take out their number strip which has the numbers 0–20. You only need to go as far as the number 15. Using a whiteboard marker or pencil, ask your child to fill in the numbers on the strip starting at 0. When finished, ask your child to rub out the numbers. Hopefully, the number strip is laminated and you can write in a few numbers, e.g. 3, 6, 10, 13. Now ask your child to write in the missing numbers. Do this activity a number of times.

Variation: Ask your child to fill in the numbers on the number strip again, but this time starting at 15 and working backwards to 0.

Estimate and count

Give your child a bowl, plate or box and 15 similar objects, e.g. counters, marbles, buttons or beads, etc. Ask your child to close their eyes. Place any number of the objects (1–15) into the bowl, plate or box. When ready, ask your child to open their eyes and look at the bowl for 3 seconds. They must estimate (guess) the amount of objects in the bowl and write down how many they think are there. Together, count the objects and check if the estimate was correct, close to or far away from the actual amount.

Fast tweezers

Give your child 15 small items (as indicated above), a pair of tweezers, and a bowl, box or paper plate, etc. On your agreed signal (e.g. 'Go!'), your child must race to pick up as many items as they can, one at a time, and place them in the bowl in 15/20 seconds, etc. When finished, ask your child to write the partition sentence on a piece of paper, showing how many beads they placed in the bowl and how many were left out, e.g. there were nine in the bowl and six left outside: 15 = 9 + 6.

Ten frame teen numbers

Give your child two ten frames and different-coloured counters – 10 red and 10 green (any colour will do). Write down or call out any number from 11 to 15, e.g. 12. Get your child to use one colour to complete the first ten frame (a ten). They must complete the number 12 by placing two of the different coloured counters on the second ten frame. Ensure that your child fills the ten frames correctly by always starting at the top left and then moving to the bottom left.

Number Hunt

Ask your child to write the numbers 10–15 on separate pieces of paper. Then ask your child to pick a number and find that number somewhere in your home—for example, on a calendar, a clock, a book page, or a number strip. When they find it, they should say the number aloud and write it down. Repeat with the other numbers to reinforce recognition.

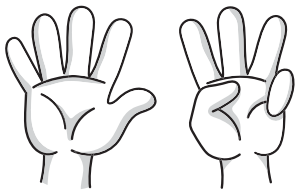
Missing Number (10–15) – Home Activity

Ask your child to write the numbers 10–15 in order on separate pieces of paper. Then have your child close their eyes while you remove one number. Ask your child to open their eyes and figure out which number is missing. They should say the number aloud and write it down. Repeat with different numbers.

This week your child will be introduced to Numbers 15-20 in Chapter 6 of *New Busy at Maths – Year 2*. Ensure your child is able to count forwards and backwards to 20.

Four-handed teen numbers

Work with your child to make the numbers 15–20 with your hands. Hold up both hands to make 10 with your fingers. Ask your child to hold up any number of fingers between 1 and 10 to make the units. Ask them to show 18. Take a photograph, if possible, of some of the representations of the numbers 15–20 and refer to them now and again. Ask your child to also make numeral cards to go with each representation or write the numerals on pieces of paper, cardboard or Post-it notes as they make each number.



Number strips 0 to 20

Ask your child to take out their number strip which has the numbers 0–20. Using a whiteboard marker or pencil, ask your child to fill in the numbers on the strips starting at 0. When finished, ask your child to rub out the numbers. Hopefully, the number strip is laminated and you can write in a few numbers, e.g. 2, 7, 9, 14, 16, 17, etc. Now ask your child to write in the missing numbers. Do this activity a number of times.

Variation: Ask your child to fill in the numbers on the number strip again, but this time starting at 20 and working backwards to 0.

Estimate and count

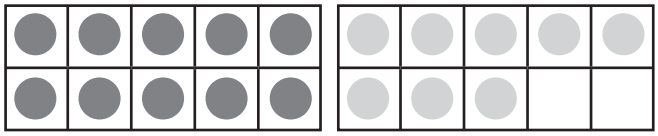
Give your child a bowl, plate or box and 20 similar objects, e.g. counters, marbles, buttons or beads, etc. Ask your child to close their eyes. Place any number of the objects (1–20) into the bowl, plate or box. When ready, ask your child to open their eyes and look at the bowl for 3 seconds. They must estimate (guess) the amount of objects in the bowl and write down how many they think are there. Together, count the objects and check if the estimate was correct, close to or far away from the actual count.

Fast tweezers

Give your child 20 small items (as indicated in the previous activity), a pair of tweezers, and a bowl, box or paper plate, etc. On your agreed signal (e.g. 'Go!'), your child must race to pick up as many items as they can, one at a time, and place them in the bowl in 15/20 seconds, etc. When finished, ask your child to write the partition sentence on a piece of paper, showing how many beads they placed in the bowl and how many were left out, e.g. there were 12 in the bowl and eight left outside: 20 = 12 + 8.

Ten frame teen numbers

Give your child two ten frames and different-coloured counters – 10 red and 10 green (any colour will do). Write down or call out any number from 15 to 20, e.g. 18. Get your child to use one colour to complete the first ten frame (a ten). They must complete the number 18 by placing eight counters of a different colour on the second ten frame. Ensure that your child fills the ten frames correctly by always starting at the top left and then moving to the bottom left.



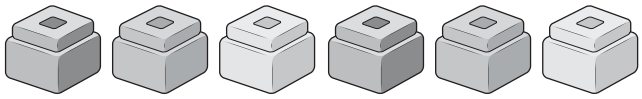
Dice addition

Give your child three six-sided dice and ask them to roll the three dice. Your child must then make that number of jumps on their number strip to find the total of the numbers they rolled, e.g. If they rolled 8, 6 and 5, they must start at zero (0) and jump to 8 and then to 14 and then to 19. Ask them to write the number sentence:
8 + 6 + 5 = 19.

This week your child will be exploring patterns all around them in Chapter 7 of *New Busy at Maths – Year 2*.

Interlocking cube patterns

Give your child some coloured interlocking cubes or multi-links and ask him/her to make some simple patterns using any two colours, e.g. red, green; red, green; red, green.



Variation: Ask your child to use more than two colours, e.g. green, red, yellow; green, red, yellow.

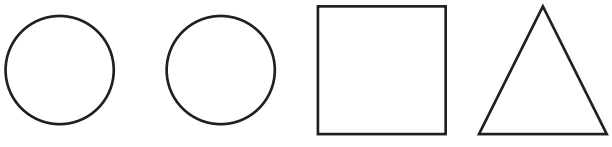
Button patterns

Give your child some buttons and ask him/her to make some simple patterns. Have about two different types of buttons. e.g. 6 large and 6 small. He/she can make patterns such as: 1 large, 1 small, 1 large, 1 small, 1 large, 1 small, etc.

Variation: Ask your child to make more complicated patterns, e.g. 2 large, 1 small; 2 large, 1 small, etc.

Shape patterns

Give your child a small square box or cube that is to hand. Help him/her to place the box on a sheet of paper and to trace around it. The drawn shape should be a perfect square.



You can do the same with any other objects that can be traced to make a triangle (pizza slice, birthday banner), to make a rectangle (cereal box) to make a circle (tin of peas, beans).

Ask your child to arrange the shapes in a simple pattern, e.g. circle, circle, square, triangle; circle, circle, square, triangle; circle, circle, square, triangle.

Variation: Ask your child to make more complicated patterns, e.g. circle, square, square, triangle, rectangle, rectangle; circle, square, square, triangle, rectangle, rectangle.

He/she can colour the different shapes to highlight the pattern.

Counter patterns

Give your child some coloured counters and ask him/her to make some simple patterns. Have three different colours, if possible. Ask him/her to make some simple patterns using the three colours, e.g. red, blue, green; red, blue, green, etc.

Variation: Ask your child to use more than one of each colour, e.g. 2 green, 3 red, 1 yellow; 2 green, 3 red, 1 yellow. He/she should make the pattern as simple or as complicated as he/she likes or is able to do!

Coin patterns

Give your child some real or plastic coins: 1p, 2p, 5p, 10p and 20p. Ask him/her to make coin patterns, e.g. 1p, 2p, 2p, 5p; 1p, 2p, 2p, 5p; 1p, 2p, 2p, 5p ….



Variation: Ask your child to use more coins and to make the patterns more or less complicated, e.g. 2p, 2p, 1p, 5p, 5p 20p; 2p, 2p, 1p, 5p, 5p, 20p ….

Dice patterns

Ask your child to roll two dice with different numbers to start a pattern, e.g. 3 and 2. Continue the pattern by adding the numbers 3 and 2, e.g. 3, 2; 3, 2; 3, 2; 3, 2; 3, 2 …

Variation 1: You and your child can use 3 dice to make the patterns more difficult, e.g. 4, 5, 1; 4, 5, 1; 4, 5, 1…

Variation 2: You and your child can use 4 dice to make the patterns more difficult, e.g. 2, 4, 3, 1; 2, 4, 3, 1; 2, 4, 3, 1…

Variation 3: You and your child can roll one die (dice) four times to make the pattern more difficult, e.g. 5, 3, 4, 1; 5, 3, 4, 1…

This week your child will be exploring ordinal numbers (1st, 2nd, 3rd, and last) in Chapter 8 of *New Busy at Maths – Year 2*.

Ordering the toys

Place three toys, e.g. a teddy, rabbit and horse, in a row on the table. Have them all facing in the same direction as if heading for the finishing line of a race.

Ask questions, such as:

- Which animal is in first place?
- Which animal comes next?
- Which animal is in last place?
- Which animal is in between the horse and the teddy?
- Which animal comes just after the rabbit?

Change the order of the animals and ask:

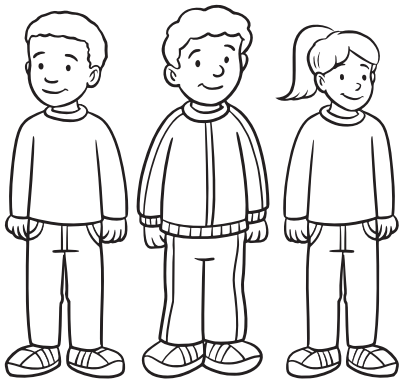
- Is the teddy in first place now? Why/Why not?
- Is the rabbit in the middle now?

In a queue

When you are in a queue in a supermarket or at a bus stop, ask your child who he/she thinks is in first place, last place, etc.

Who is first or last?

Have three family members, including your child, line up. Give each one a Post-it note or piece of paper with first (1st), second (2nd), third (3rd) or Last on it. Ask the family members to stand in the correct order.



Fridge magnets

Ask your child to arrange three fridge magnets in order and have him/her explain to you which one is first (1st), second (2nd), third (3rd) or last.

Ordinal number activities

Car races: This game is best played by three or four family members or friends. Write the ordinal numbers First (1st), Second (2nd), Third (3rd) and Last on pieces of card/Post-it notes. Each player needs a toy car. They all begin from an agreed starting line (e.g. a line of blue masking tape on the floor), and push his/her car once only. When the cars have stopped moving, the players must determine which car came 1st (travelled the furthest), 2nd, 3rd and 4th/last. Each player then takes the card/Post-it note which represents the position of his/her car in the race.

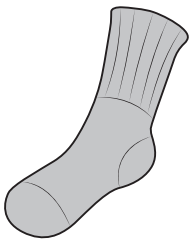
Note: Advise the players to push the cars with normal force rather than really hard. The children swap cars and play again.

Jigsaw races: Again, this game is best played by three or four family members or friends. Use the ordinal numbers First (1st), Second (2nd), Third (3rd) and Last on pieces of card/Post-it notes from Car Races. Each player needs a jigsaw that is to hand in the house (four jigsaws of equal difficulty would be great – 12-piece jigsaws would work well). The players must all begin making their jigsaws at the same time. The first player finished takes the '1st' place card. The next child finished must take the '2nd' card and so on, until all four children are finished.

Extension: The players swap jigsaws.

Sock throw

Any number of players can play this game. Each player needs five socks or soft balls. Beanbags or small plushies can also be used. Place a hula hoop or a ring made with string about 5 paces away. Each player has socks of the same colour, e.g. Evan has five red socks, Beth has five blue sock. The players must stand at an agreed mark. The player to get most of their socks inside the hoop takes the '1st' place card. The next child finished must take the '2nd' card and so on, until all four players are finished.



This week your child will be revising the days of the week while he/she will be introduced to the months of the year and the four seasons in Chapter 9 of *New Busy at Maths – Year 2*.

Talk to your child about the following activities. Ask him/her on which days she does or would like to do the activities. Feel free to add in activities that would be more suited to your child.

- Swimming
- Football
- Library
- Shopping (in the supermarket)
- Going to a birthday party
- Flying a kite
- Going to the park
- Cycling
- Scooting
- Playing rugby
- Dancing
- Visiting grandparents
- Watching TV
- Reading a book
- Playing on a tablet/console

The months of the year

Write the names of the months of the year on pieces of paper, cardboard or Post-it notes. Place the names of the months randomly on the kitchen table. Now ask your child to place the names in order starting with January. Then ask a number of questions, such as:

- Can you pass me December?
- Which month comes after February?
- Which month comes after May?
- Hand me the month that comes just before May.
- Can you give me the month that comes between May and July?
- Hand me the third month of the year.
- Show me the months of the summer holidays?
- Which is your favourite month? Why?

The four seasons

Write the names of the four seasons of the year on pieces of paper, cardboard or Post-it notes. Place the names of the seasons randomly on the kitchen table. Now ask your child to place the names in order, starting with spring.

Season sorting

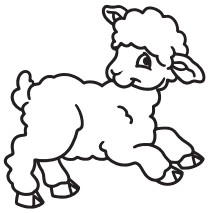
Give your child the months of the year and the four seasons from the previous activities. He/she must sort the months into the correct season, starting with March in spring. You may help to read out the names of the different months.

- **Spring:** March, April, May
- **Summer:** June, July, August
- **Autumn:** September, October, November
- **Winter:** December, January, February

The odd-one-out!

Ask your child to source some or all of these pictures from magazines, newspapers, etc. He/she can cut them out and decide which is the odd-one-out in each season. You may prefer that your child draw the items for each season and colour the odd-one-out in each season.

Spring: flower buds, baby lamb, leaf buds on a tree, spring tree, squirrel collecting nuts, daffodils



Summer: sunglasses, flowers, butterfly, leafy summer tree, snowman, paddling pool, sun



Autumn: baby lamb, hedgehog, squirrel gathering acorns, pumpkin, autumn tree, pile of autumn leaves



Winter: winter tree, daffodils, scarf, winter coat, snowman, sleeping hedgehog, hot chocolate



This week your child will be introduced to mental strategies (doubles and bridging a ten) to help them with addition in Chapter 10 of *New Busy at Maths – Year 2.*

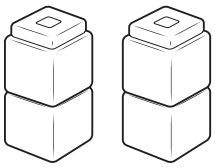
Doubles and making a ten

Your child needs to know the following language. Two identical numbers, *e.g.* 4 + 4 = 8, are called **doubles**. Children find it easy to remember these doubles. Children also find it easy to **make a ten**, *e.g.* 7 + 3 = 10; 8 + 2 = 10, *etc.*

Doubles towers

Give your child 10 interlocking cubes or Lego bricks. You first make a tower of two bricks. Your child then copies your tower to make a tower of the same size. Place the towers side by side and identify the double, *e.g.* 2 + 2 = 4. Do the same with all the doubles 3 + 3 = 6; 4 + 4 = 8; up to 10 + 10 = 20. Ask your child to memorise these over a number of days.

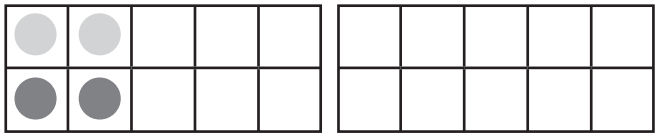
Extension: Ask your child to show the doubles they have made on two ten frames.



Ten frame doubles

Use two ten frames and 10 counters of two different colours (10 blue and 10 red) for this activity. Place a counter on the ten frame and ask your child to mirror the action. They can work through the doubles from 1 + 1 = 2 to 10 + 10 = 20.

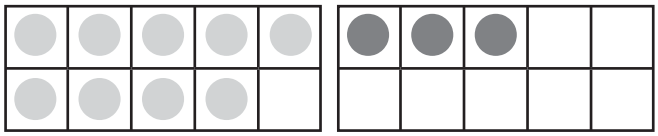
Variation: Ask your child to focus on all the doubles cards within 20 or focus on the doubles within 10. Place one red counter in the first square and one blue underneath. That shows 1 + 1 = 2. Place two red counters in the first two squares and two blue underneath. That shows 2 + 2 = 4.



Place three red counters in the first three squares and three blue underneath. That shows 3 + 3 = 6. Continue in this way until they have 10 + 10 = 20.

Bridging ten

Use two ten frames and 10 red and 10 green counters (any colour will do) for this activity. Ask your child to write down any addition number sentence, *e.g.* 9 + 3 = ?



Move the counter from the second frame to make a ten in the first frame, so 9 + 3 becomes 9 + 1 + 2 becomes 10 + 2 = 12. Do the same with the other questions:

8 + 4 = 8 + 2 + 2 → 10 + 2 = 12

7 + 8 = 7 + 3 + 5 → 10 + 5 = 15

9 + 5 = 9 + 1 + 4 → 10 + 4 = 14

Problem-solving

Perform problem-solving activities with your child at any time. Ask simple questions such as:

- How many ducks can you see in the pond?
- If seven more ducks come along, how many ducks would be in the pond then?
- If three more came along, how many ducks would there be?

Give other problems to your child using everyday objects such as apples, pears, bananas, spoons, toys, or anything else your child is interested in.

This week your child will be exploring length in Chapter 11 of *New Busy at Maths – Year 2*. As in Year 1, he/she needs to know the words long, longer, longest, tall, taller, tallest, short, shorter, shortest, wide, wider, widest, narrow, narrower, narrowest.

Which is long, longer and longest?

Give your child three different objects of different lengths, e.g. a marker, pencil and crayon (any objects will do!). He/she should place the three objects under each other lengthways, and compare their lengths.

Note: Each object must start from the same point. You could place a straw at the side with the three objects starting in length from there.

Ask your child to compare the lengths to see which is long, longer and longest.

Which is tall, taller and tallest?

Reuse the three objects from the previous activity. This time, place the objects vertically (upright) and ask your child to compare their heights to see which is tall, taller and tallest.

Variation: Place three towers of 6, 8 and 10 Lego bricks or cubes together in a row. One tower could be red, the other green and the third blue. Now ask your child to tell you which is tall, taller and tallest? The towers could also be placed horizontally and you could ask questions about which tower is long, longer and longest.



Which is wide, wider and widest?

Give your child three different objects of different widths, e.g. a piece of string, a piece of ribbon and a scarf (any objects will do!). He/she should place the three objects vertically or horizontally and compare their widths.

You could also use regular items such as a schoolbag, lunchbox, chair, table or window. Allow items from around the house to be used for comparison in width.

Measuring your table

Ask your child to measure the length or width of a table or chair using his/her Maths or English book.He/she places the Maths book on the table, moves it over and counts how many times he/she moved it. Ask him/her to count the number of times she needed to use the Maths book (to the nearest whole number). Then ask your child to use a different measure, e.g. his/her English book.

Ask questions such as: 'Did you need more or fewer Maths books or English books to measure the length of the table? Why was that?'

Measuring people

Measure the height of your child and any other family members who agree against a wall. Mark the heights with a piece of string. Discuss the results: Who is the tallest/shortest/smallest? Are any children almost the same height?

(Be careful not to upset any child who might be sensitive about their height.)

It might be more appropriate to ask: 'How many in the family are taller/shorter than Eve?'

Extension: Invite your child to make a tower of blocks, cubes or multi-links that is the same height as the tallest/smallest member of the family.

Game: I Spy…

Play the game *I Spy with My Little Eye* with your child. Any number of family members can play and all can guess the answer. You can start with: 'I spy with my little eye something that is wider than a pencil?' Answers could be anything in the room, e.g. chair, radiator, table, television, cooker. The player who answers the object correctly gets to call out something that is wider than a chair, e.g. a table. If correct, the child with the correct answer goes next, e.g. 'What is **narrower** than a table?' (same object as their answer) and the game carries on. Questions alternate between wider than and narrower than.

Rule: You cannot call out an object already used by someone else in the game.

Variation 1: I spy with my little eye something that is taller/shorter than a jug, etc.

Variation 2: I spy with my little eye something that is longer/shorter than a box of cereal, etc.

This week your child will revisit Combining in Chapter 12 of *New Busy at Maths – Year 2* building on the learning explored in Chapter 3.

Combining dice numbers

Give your child three dice and ask him/her to roll all three dice together. Then ask him/her to add the totals. Encourage your child to say the number sentence aloud, for example 4 + 3 + 5 = 12, and to check the answer with an adult.

Extension: Your child can write the number sentence or a vertical sum on a whiteboard. Some children may use counters or a number line to help them add the numbers.

Combining finger numbers

Ask your child to show a number using their fingers. Then show a different number using your own fingers. Encourage your child to identify each number represented and combine the two numbers to find the total, working with totals up to 20.

Extension: Your child can write the number sentence, for example 7 + 5 = 12.

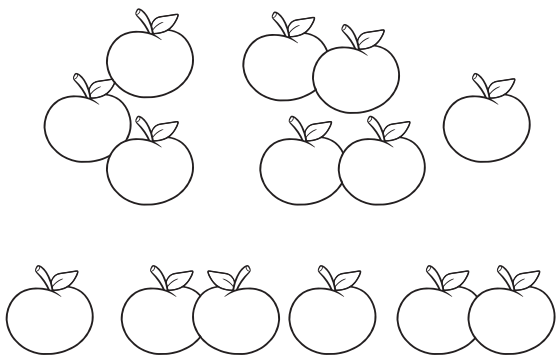
Combining fruit

Place some pieces of fruit, for example 8 apples, on the kitchen table. Add some more fruit, for example 6 more apples, and ask:

- How many apples had we at first?
- How many more did we add?
- How many apples have we altogether?

This shows that 8 + 6 = 14. Continue using different amounts up to 20.

Extension: Your child can write the number sentence on a whiteboard or use real objects to check the total.



Twenty frame combining

Work with your child using a twenty frame and coloured counters. Place some counters on the frame, for example 8 red counters and 6 blue counters, filling from left to right. Ask your child to say the number sentence shown, for example 8 + 6 = 14.

Extension: Your child can write the number sentence on a whiteboard or try making different combinations up to 20.

Block combining

Place two groups of Lego bricks or cubes in different colours on the table, for example 9 red cubes and 5 green cubes.

Ask your child to join the two groups together and say the number sentence, for example 9 + 5 = 14. Continue using different combinations up to 20.

Extension: Your child can make their own number combinations using different coloured cubes and find different ways to make the same total.

Combining magnets

Place some objects, such as fridge magnets, on the table, for example 4 magnets. Add some more, for example 9 magnets, and ask:

- How many did we have at first?
- How many more did we add?
- How many magnets have we altogether?
- This shows that 4 + 9 = 13.

Continue using numbers up to 20.

Extension: Your child can write the number sentence on a whiteboard or check the total by counting all the objects.

This week your child will be exploring 2-D shapes – square, rectangle, circle and triangle – in Chapter 13 of *New Busy at Maths – Year 2*.

2-D Shapes

First, talk to your child about 2-D shapes.

A **square** has one flat face with four straight sides of equal length. It has four corners. Technically all these 2-D shapes are really 3-D shapes as they have depth/thickness, even a sheet of paper. Here we are just dealing with the flat piece that we can see.

A **rectangle** has one flat face with the opposite sides of equal length, and four corners, *e.g.* a sheet of paper.

A **circle** has one flat face, one curved side and no corners, *e.g.* clock face.

A **triangle** has one flat face, three straight sides and three corners, *e.g.* YIELD sign.

Recite/sing the song with your child:

It can be sung to the tune of 'Frère Jacques'.

'Shapes'

This is a square. This is a square.
How can you tell? How can you tell?
It has four sides,
All the same size.
It's a square. It's a square.

This is a circle. This is a circle.
How can you tell? How can you tell?
It goes round and round,
No end can be found.
It's a circle. It's a circle.

This is a triangle. This is a triangle.
How can you tell? How can you tell?
It only has three sides,
That join to make three points.
It's a triangle. It's a triangle.

This is a rectangle. This is a rectangle.
How can you tell? How can you tell?
It has two short sides,
And it has two long sides.
It's a rectangle. It's a rectangle.

Sing the song again and ask your child to make each shape using his/her arms, fingers as he/she sings.
Note: These activities were also done in Year 1.

Drawing 2-D shapes

Give your child a small square box or anything in that shape that is to hand. Help him/her to place the box on a sheet of paper and to trace around it. The drawn shape should be a perfect square.

You can do the same with any other objects that can be traced to make a triangle (birthday banner), to make a rectangle (cereal box) to make a circle (tin of peas/beans, etc.)

Shape trail

Ask your child to find examples of objects that are shaped on one side like a square, rectangle, circle and triangle in the house/garden.

Rectangle examples: windowpane, door, television screen, table top, floor, rug, bed, radiator, chair seat, etc.

Square examples: floor/wall tiles, boxes, dice, ice cubes.

Circle examples: tins of peas, coins, tyres/wheels, hula hoop, plates, saucers.

Triangle examples: road signs, Toblerone bars, birthday banners, sandwiches, etc.

Making 2-D shapes

Give your child a selection of materials that are to hand in the house, *e.g.* lollipop sticks, headless match sticks, string, playdough, straws, pipe cleaners, tape.

Ask your child to make different examples of squares, rectangles, triangles and circles using a range of the materials.

Shape pictures

Ask your child to make a shape picture using squares, rectangles, circles and triangles. He/she could make a picture of a train, a castle, or even a clown.

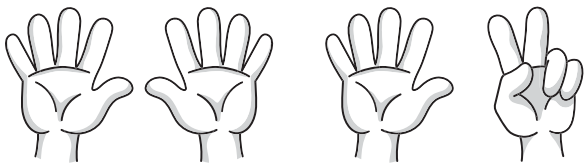
He/she can colour the picture when finished.



This week your child will be introduced to Place Value in Chapter 14 of *New Busy at Maths – Year 2*.

Game 1: Four-handed teens (revision)

Work with your child to make the numbers 11–19. Hold up both hands to make 10 with your fingers. Have your child hold up any number of fingers between 1 and 10 to make the units.



Game 2: Arms up, arms down

Ask your child to stand up and begin counting 1–20. They must put their arms up in the air when they say 1 and put their arms down when they say 2, until they reach the target number 20.

Game 3: Blast off!

Ask your child to count to 20 beginning at 1. Each time they say a decuple (10, 20, 30, 40, etc.), they shout 'Blast off' and mimic blasting off like a rocket using their hands. For example: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 'Blast off', 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 'Blast off'.

Making a ten

Ask your child to place 10 small items from around the house on a plate/box or in a Ziploc bag. Use anything of interest to your child, e.g. dinosaurs, toy cars, pasta shapes, fruit, cubes, buttons, shells, etc. Invite your child to say: '*I have made one bundle/group of ten.*' They can place a numeral card 10 beside the bundle.

Variation: Place some lollipop sticks, straws, keys, crayons, markers, bottle tops, etc. (up to 19) on the table. Ask your child to use pieces of string or elastic bands to bundle the 10 chosen items together. Invite them to say: '*I have made one bundle/group of ten.*' They can place the numeral card 10 beside each bundle.

Numbers to 19

As with the variation earlier, place some lollipop sticks, straws, keys, crayons, markers or bottle tops on the table. Ask your child to count out 14 of their chosen items. Then ask your child to use pieces of string or elastic bands to bundle 10 items together. Ask questions such as:

- How many straws are there altogether?
- How many straws are in the bundle?
- How many bundles of 10 are there?
- How many straws are left over?
- How many straws are outside the bundle?

So, 14 is made up of a bundle of 10 straws and 4 loose straws or 14 = 10 + 4. Do this with a range of items using numbers from 10 to 19.

The ten frame



Revise work done on making a ten using your child's ten frame. Give your child 10 similar items, e.g. cubes, counters, buttons, shells, fridge magnets, conkers, etc. Ask them to make a ten in different ways, e.g. 3 red counters and 7 blue counters; 4 yellow and 6 green; 2 orange and 8 purple, etc.

Remember, the colours are not particularly important. Now use two ten frames to help your child understand how to make tens and units.

1 ten + 3 units = 13

Ask your child to fill the first ten frame with 10 cubes or counters, etc. and to place three cubes on the other frame.

- How many cubes are in the first ten frame?
- How many cubes are in the second ten frame?
- How many cubes are there altogether?

So, 13 is made up of a group/set of 10 cubes and 3 cubes or 13 = 10 + 3. Do this with other numbers from 10 to 19.

This week your child will organise information on pictograms and block graphs in Chapter 15 of *New Busy at Maths – Year 2*. Your child is expected to represent and interpret data (information, objects, etc.) in four or five rows or columns. It is best to introduce him/her to data by using a range of objects with which he/she is familiar.

Making rows

Give your child some counters, buttons, Lego bricks, or 1p coins, etc. Ask him/her to make a row of five, e.g. 1p coins. Then ask him/her to place a row of four 1p coins directly underneath.

These rows should be in one-to-one correspondence, i.e. your child should be able to see the coins in the bottom row that correspond to the ones in the top row. He/she should also be able to see that there is an extra coin in the top row. Ask questions, such as:

- How many coins are in the top row?
- How many coins are in the bottom row?
- How many more coins are there in the bottom row than in the top row?
- How many fewer coins are there in the bottom row than in the top row?
- What could we do to make the two rows have the same amount? (Add one more to the bottom; take one away from the top.)

Lego sorting

Place Lego bricks of four different colours (e.g. red, green, blue and yellow but any colours will do!) randomly on the table. Place four saucers on the table, also. Ask your child to sort the Lego bricks according to colour. He/she must place the red blocks on one saucer, the green on another and so on.

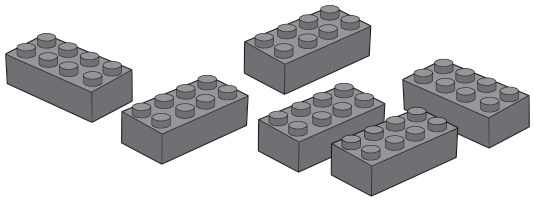
Variation: Use Lego bricks of the same colours as above, but this time have some small, medium and large bricks. Place three saucers on the table and ask your child to sort the Lego bricks into sets of small, medium and large blocks.

Make a snake

Give your child cubes or multi-links of three or four different colours. Your child must choose a colour, and make a 'snake' using those coloured items.

Pictograms – Lego bricks

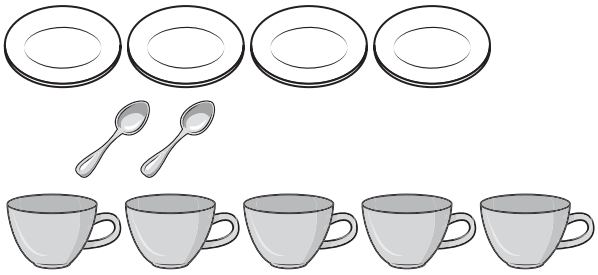
Place a number of different coloured Lego bricks on the table, e.g. three red, four green, five yellow, four blue. Ask your child to arrange them in vertical columns of red, green, yellow and blue. Make sure that all the columns start from the same base as in the picture.



Now ask your child questions such as: 'Which row has most/fewest blocks? Have any rows the same amount?'

Pictograms – sorting items

Give your child a selection of 5 cups, 4 saucers and 2 spoons (or any other household items). Ask your child to sort the items vertically, starting from the same base.



When that is done, encourage your child to rearrange the items into horizontal rows.

Block graph

In a block graph, items are represented by blocks rather than by pictures.

Make a block graph as on page 22 of the Home School Links Book and ask your child to colour 5 blocks to represent the cups, 4 for the saucers and 2 for the spoons. He/she can draw a cup at the bottom of the first column, a saucer at the bottom of the second and a spoon at the bottom of the third.

This week your child will be exploring 3-D shapes – cube, cuboid, cylinder and sphere – in Chapter 16 of *New Busy at Maths – Year 2*.

3-D shapes have three dimensions: length, width/breadth/depth and height. **Note:** Some of these are revision of activities done in Year 2.

3-D shapes

Point out to your child some shapes around the house or when out shopping that come in the shape of a cube, cuboid, cylinder or sphere. Some of the packets may be for sweets or other unhealthy products, so emphasise the importance of healthy eating.

Cube: Six flat faces of equal size and eight corners, e.g. die, dice, Oxo cube, ice cubes, boxes.

Cuboid: Six flat faces, with the opposite faces of equal size, and eight corners, e.g. cereal packets, shoeboxes, pencil cases, books.

Sphere: Round in shape, has one curved face and no corners, e.g. footballs, tennis balls, basketballs, marbles, some lights, the moon, the sun and other planets.

Cylinder: One round face and two flat, circular ends, e.g. tins of beans, peas, soup, Pringles, Smarties boxes, packets of mints, fire extinguishers.

Shape trail

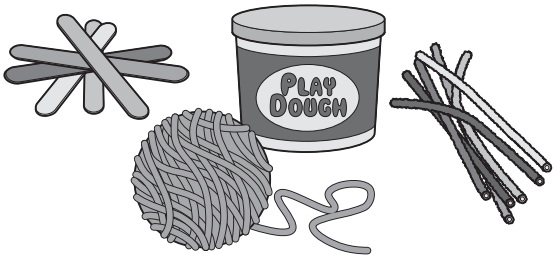
Ask your child to look around the house to find examples of objects that are shaped like a cube, cuboid, sphere or cylinder. He/she should chat about his/her examples and draw pictures of these objects on an A4 sheet of paper. There are examples in the section opposite.

Play dough faces

Give your child some playdough and a selection of 3-D shapes (cubes, cuboids, spheres and cylinders) that are to hand in the house. He/she can explore the relationship between 3-D shapes and 2-D shapes by pushing the faces of the 3-D shapes into the playdough and observing the 2-D shape prints left in the playdough.

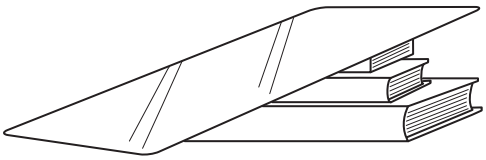
Making 3-D shapes

Give your child a selection of materials, e.g. lollipop sticks, headless match sticks, string, playdough, straws, pipe cleaners, shells, buttons. Ask him/her make different examples of cubes, cuboids, spheres and cylinders of different sizes by sticking them together with Blu Tack or glue to keep them steady.



Will a 3-D shape roll?

Make a simple ramp with your child, e.g. using a whiteboard and some books. Give your child a selection of 3-D shapes to find out whether they can roll down the ramp, e.g. Lego brick, cup, mug, plate, die, salt cellar, roll of toilet tissue or carboard insert, small ball, plastic beaker, Rubik's cube, shoe box, sugar cube, empty juice carton, marble. (Discuss how handles on cups, etc., stop them from rolling.)



When your child has identified the objects that roll, encourage him/her to see which object rolls the furthest/shortest distance.

Will 3-D shapes stack?

Give your child a selection of 3-D shapes. Ask him/her to build different types of tower using these shapes. You could say: 'Your tower must have cubes and cylinders. Build a tower that is taller than your table. Your tower must include a sphere!'

If a sphere is used in the tower, ask: to 'Do you think this is a good item to stack?'

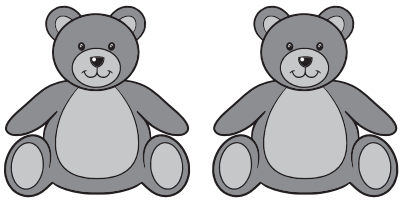
If a cylinder is used to make the tower ask: 'Why do you think this is not a good item to stack? Can we actually use it to stack?' (*Yes!*, if upright).

This week your child will be introduced to transformations in Chapter 17 of *New Busy at Maths – Year 2*. Transformation looks like a difficult word, but it simply means how objects change position when they are moved or pushed. Shapes can slide, flip or turn (rotate).

Follow the leader

You and your child need an identical object, e.g. a teddy, a toy car, a box of cereal. Place your object in any position on the table or floor. Your child must place his/her object in the exact same position (e.g. standing up tall, lying on its side on his/her chair facing the same direction).

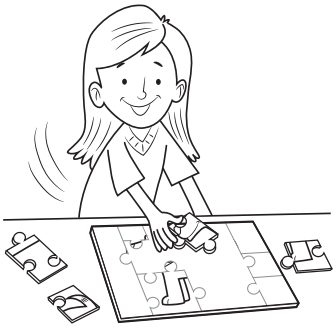
Using another object, your child can be the leader and you must follow his/her actions.



Making jigsaws

Ask your child to complete a relatively easy jigsaw – any jigsaws in the house will be fine. As he/she makes the jigsaw, encourage him/her to talk about the different ways he/she needs to move the jigsaw pieces while doing it, e.g. 'Turn it this way, turn it over, twist it, turn it around, flip it over to see it, slide it along the table to see will it fit, move it along the bottom.'

Your child can make a few more simple jigsaws and use the language as he/she makes it.



Moving 3-D shapes

Give your child a selection of 3-D shapes (cubes, cuboids, sphere, cylinders). These could be any shapes from around the house, e.g. sugar cube, can of beans, Rubik's cube, shoe box, Jenga brick, ball.

Write out some instruction cards as shown below.

- Turn it around.
- Push it over.
- Stand it up tall.
- Place it on its side.
- Flip it over.
- Slide it along the table.

The instruction cards can be placed face down on the table in front of your child. He/she chooses a card and reads it out, or it can be read out by another family member/guardian. He/she then has to perform that action on the object he/she has chosen, e.g. The tin of beans is lying flat and the card say: 'Stand it tall' (upright).



Extension: Each time your child performs the action, he/she should say whether or not the action changed how the object looks, e.g. 'Put it on its side' will change the appearance of a can of beans, but might not change how a yellow ball looks.

Tower building

Give your child a selection of 3-D shapes (cubes, cuboids, spheres and cylinders). As earlier, these could be any shapes from around the house. Ask your child to make different types of towers using different combinations of the shapes. He/she has to observe that some shapes are very difficult to use for building, while others are great. That said, a sphere which is impossible to build with, could be placed at the top of a castle/tower.

Move and trace

Give your child your mobile phone or a small box and a sheet of A4 paper. Help your child to place the mobile phone on a piece of paper and to trace around it. Now he/she has a small rectangle. Help him/her to move the phone to a different position on the A4 sheet and trace around it again. Encourage him/her to move the rectangle in different ways, e.g. slide it, flip it, turn it. When the task is over, he/she should have a page of the same rectangle in different orientations. If he/she colours the different rectangles, it will become more obvious.

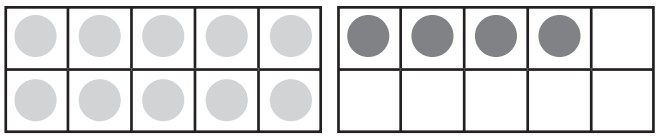
This week your child will revisit Place Value in Chapter 18 of *New Busy at Maths – Year 2* building on the learning explored in Chapter 14.

Game 1: Blast off! (revision)

Ask your child to count to 20 beginning at 1. Each time they say a decuple (10, 20, 30, 40, etc.), they shout 'Blast off' and mimic blasting off like a rocket using their hands. For example: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 'Blast off', 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 'Blast off'.

Ten frame teen numbers

Give your child two ten frames. Place the ten frames beside each other horizontally. Give your child 10 red or green counters (any colour will do). Call out a teen number, e.g. 14. Ask your child to fill their first ten frame with 10 red counters. They then place four green counters in their second ten frame to have 14 = 10 + 4. Do this with all the teen numbers. Get your child to write the partition sentences, e.g. 14 = 10 + 4 on an A4 sheet of paper.



Money teen numbers

Give your child nine real 1p coins and one real 10p coin. You can play the role of banker. Your child takes a 1p coin and says 'one' as they place it on the notation board. They take another 1p coin and says 'two' while they place that coin above the first coin. When they get to 10p, you, the banker, swaps the ten 1p coins for one 10p coin and say 'one ten'. Your child takes another 1p coin and says 'eleven, which is one ten and one unit'. Continue making teen numbers until your child reaches 19p. They can write the partition sentences, e.g. 19p = 10p + 9p in their copybook or on a sheet of paper.

The swapping game

Give your child their own notation board and a six-sided dice as well as nine red counters to represent units and a blue counter to represent a ten. You can play the role of banker and will hold all the counters. Your child rolls the dice and gets, e.g. a 5, and collects that number of red counters from you, the banker. They place the five counters in the units section of the notation board ensuring to start at the bottom. They roll the dice again and get, e.g. a 3, and collect that number of red counters from you, the banker. They then place the three counters in the units section of the notation board. Play continues in this way until your child has more than nine red counters. For example, if they go beyond nine counters and have 12, they must say to you, 'I want to swap/exchange my 12 counters for one ten (blue counter) and two red counters'. Ensure they justify or show the answer as 1 blue and 2 red counters on their notation board. Ask them to write the partition sentences, e.g. 12 = 10 + 2 in their exercise book or on a sheet of paper.

What's my number?

You give one clue to your child as to what the mystery number is, using tens and units in the sentences. Say to your child: 'I have 4 more units than 13. What number am I?' If they get the number correct, they ask you a similar type question, e.g. 'I have 7 units and no tens. What number am I?'

Examples of questions:

a) I have 2 units more than 4. What number am I?

b) I have 1 ten and 1 unit. What number am I?

c) I have 1 ten and 3 units. What number am I?

d) I have 4 units more than 15. What number am I?

e) I have 3 units more than 17. What number am I?

Maths eyes

Using the microwave at home, ask your child to heat something for 19 seconds at teatime, lunchtime or dinnertime. Ask them to count down from 19 to 0 in time with the microwave. See if your child can find other items around the home with the teen numbers on them, e.g. TV channels, thermometer, car registration numbers, calendars, mobile phones, bus numbers, etc.

This week your child will revisit Time. He/she will be introduced to reading the analogue and digital clocks using one-hour intervals in Chapter 19 of *New Busy at Maths – Year 2*.

Does it tell the time?

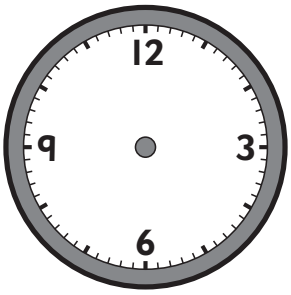
Show your child some randomly placed pictures of time pieces. These can be sourced from newspapers, magazines or the internet, etc. Have one or two pictures of objects that are not time pieces. Ask him/her to identify the objects that tell the time, e.g. cuckoo clock, grandfather clock, kitchen clock, mobile phone, cooker, watch, smart watch, Big Ben in London.

Ask him/her to remove the pictures of the other objects.

Variation: Invite your child to draw pictures of objects that tell the time, which he/she can see in the kitchen or elsewhere in the house.

Making an analogue clock

Give your child a plate that will fit on an A4 sheet. Help him/her to trace around the plate to make to circular clock face. Ask him/her to write the numbers 12, 3, 6 and 9 as in the picture. You or he/she can cut out short and long hands about the width of a lollipop stick. These could be attached with a paper fastener at the centre circle. Your child can use this clockface for some of the activities that follow.



Making a digital clock

Using the blank digital clockface shown as a guide, draw a digital clockface on an A4 sheet or on a whiteboard. Remember to place a colon (:) in the middle and blank spaces for the 4 numbers to be written in. Always use non-permanent markers when using the whiteboard. Your child can use this digital clock for some of the activities that follow.



Rolling and showing the analogue time

With your child, write the number 1–12 on small pieces of paper or Post-it notes – you will also need to have two copies of zero (0) for work on the digital clock, later. Place the numbers face down on the centre of the kitchen table. Ask your child to pick a number, e.g. 7. He/she must show that o'clock time on the analogue clock he/she created.

Variation: Invite your child to roll one or two six-sided dice. He/she adds the total number of dots, e.g. 4 and 6 = 10. He/she now must show that o'clock time on the analogue clock.

Note: It would be better if he/she could show the times by manipulating the hands on a normal, cheap, battery driven kitchen clock.

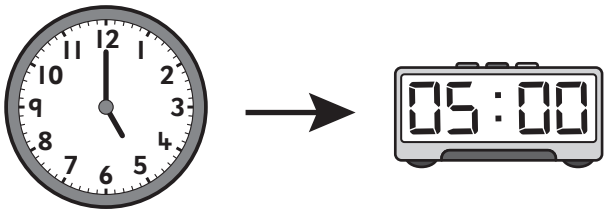
Rolling and showing the digital time

Place the papers with the numbers face down on the centre of the kitchen table again. Ask your child to pick a number, e.g. 9. He/she must show that o'clock time on the digital clock he/she drew.

Variation: Do the same activity with the two dice as in the previous activity but showing the time on the digital clockface.

Time matching

Show your child an o'clock time between 1 and 12 on the analogue clockface, e.g. 5 o'clock. Ask him/her to show the matching time on the digital clock on the whiteboard.



Variation: Show your child an o'clock time between 1 and 12 on the digital clockface, e.g. 10:00. Ask him/her to show the matching time on the analogue clock.

This week your child will be exploring spatial awareness in Chapter 20 of *New Busy at Maths – Year 2*.

Your child needs to know some of the language of spatial awareness: on, beside, in, under, between, etc. Much of this is a revision of work done in **Chapter 23** – *Year 1*.

Spatial awareness language

Write the following words on pieces of paper or on Post-it notes:

- **beside**
- **on**
- **behind**
- **under**
- **in front of**
- **in**
- **between**
- **near**
- **on the left**
- **on the right**

Place the words face down on the table. Ask your child to pick one of the words and to read it aloud. This gives him/her practice at reading these important words.

Variation: Place all the words face up on the table and ask your child to hand a particular word to you, e.g. 'Could you please hand me the word beside/between/near, etc.?'

Move the toy!

Give your child any small object that is to hand in the house, e.g. a toy car, doll, Lego brick, counter, paper clip, pencil, marker. Ask him/her to place the toy car or Lego brick in different places on his/her body, e.g.

- under your chin
- between your eyes
- in your hand/fist
- on your head
- on your nose
- under your nose
- beside your ear
- beside your neck
- behind your back
- on the back of your hand
- in front of your forehead
- in the palm of your hand
- between your thumb and index (little) finger
- balanced on your index finger
- between your knees
- at the tip of your toes on your left foot
- at the tip of your toes on your right foot

Place the counter!

Give your child a counter, e.g. a pom pom, Lego brick, paper clip, pencil or marker. Ask your child to place the counter in different places in the house, e.g.

- beside the cup/schoolbag
- under the chair/sofa
- beside the milk jug/tea caddy
- on the television/chair/table
- between the two apples/oranges/chairs
- in front of the key/pepper/coffee jar
- in the box/schoolbag/mug
- over the lamp
- in front of the milk jug
- between the cup and the spoon
- in the mug/cup/shoebox

Find the counter!

Place a counter, e.g. Lego brick, paperclip, pencil, marker, etc., in different places in the house. Ask your child to find the counter, e.g.

- beside the cup/schoolbag
- under the chair/sofa
- beside the milk jug/tea caddy
- on the television/chair/table
- between the two apples/oranges/chairs
- in front of the key/pepper/coffee jar
- in the box/schoolbag/mug
- over the lamp
- in front of the milk jug
- between the cup and the spoon
- in the mug/cup/shoebox

Place the apple!

Give your child an apple or any other piece of fruit available. Ask your child to place the apple in different places relative to a stool or chair in the kitchen. Use some of the following instructions: Place the apple:

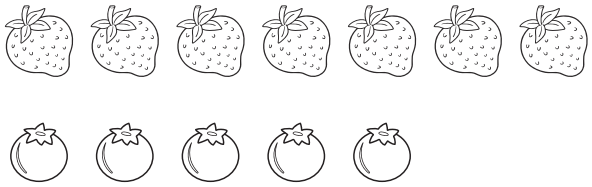
- beside the stool/chair
- on top of the stool/chair
- under the stool/chair
- to the right of the stool/chair
- to the left of the stool/chair
- in front of the stool/chair
- behind the stool/chair
- between the stool and the sofa/TV, etc.



This week your child will be exploring to the sets that have more than and less than in Chapter 21 of *New Busy at Maths – Year 2*.

The first two activities can be done with any fruit or vegetables, e.g. apples, pears, strawberries, grapes, tomatoes, cherries, blueberries, etc.

Fruit rows

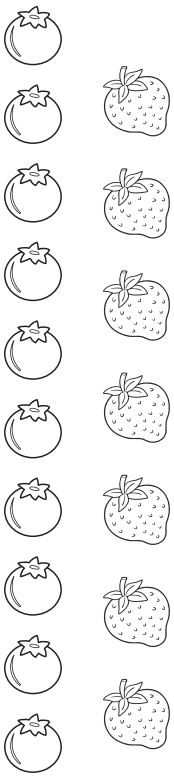


Place a row of strawberries (up to 20) on the table and a row of blueberries (up to 20) underneath them. Ensure that one row of fruit has more and one row has less. Ask your child to count how many strawberries and blueberries are in each row. Then ask him/her to tell you which row has more items in it. In the above example, there are more strawberries than blueberries.

Variation: Ask your child to tell you how many more strawberries there are than blueberries, e.g. 'There are two more strawberries than blueberries' or 'There are two fewer blueberries than strawberries.'

Fruit tower

Place up to 20 strawberries on the table in a vertical line and up to 20 blueberries in a vertical line beside them. Ask your child to count the number of strawberries and blueberries that are in each column. Then ask your child to tell you which line has more items in it. In this instance there are more blueberries than strawberries.



Variation: Ask your child to tell you how many more strawberries there are than blueberries, e.g. 'There are three more blueberries than strawberries,' or 'There are three fewer strawberries than blueberries.'

Comparing towers

Have up to 20 red and 20 green Lego bricks or cubes. Ask your child to choose a number up to 20 and make a red tower with this number of bricks. Ask them to do the same with the green bricks. Ask him/her to place the towers either vertically or horizontally and say which has more.

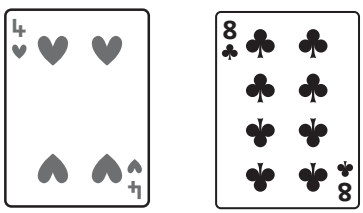
Dice numbers

You and your child will need three 6-sided dice each. You both roll your own dice and add your three numbers together to find the total. Ask your child to compare your total and their total by saying which number is more and which is less. Then ask him/her how many more or fewer one total is than the other. For example, '13 is 1 more than 12' or '12 is 1 less than 13.' Then ask your child how many more they need to make 20, encouraging them to count on from their total to 20.

Variation: Play a set number of rounds (e.g. 5 rounds). In each round, the player with the higher total wins a point. At the end, the player with the most points wins. You can also award a bonus point if a player's total is closest to 20.

Comparing playing cards

Take a regular pack of cards but only use the number cards from 1 to 10. The ace counts as 1. Place the cards face down on the table. Ask your child to pick any two cards at random and place them face up beside each other, e.g. the 4 of hearts and the 8 of spades. Your child then adds the two numbers together to find a total (up to 20). You then do the same by picking two cards and finding their total. Ask questions such as:



- Which total is more?
- Which total is less?
- How many more does the bigger total have than the smaller total?
- How many fewer does the smaller total have than the bigger total?

This can be done multiple times using different cards.

This week, your child will continue learning about measuring length, height, and width using non-standard units such as hands, cubes, and other everyday objects in Chapter 22 of *New Busy at Maths – Year 2.* This builds on and extends the learning introduced in Chapter 11.

Game: I Spy…

Play the game *I Spy with My Little Eye* with your child. **Note:** this game was also played in Chapter 11. Any number of family members can play and all can guess the answer. You can start with: 'I spy with my little eye something that is wider than a pencil?' Answers could be anything in the room, e.g. chair, radiator, table, television, cooker. The player who answers the object correctly gets to spy something that is wider than a chair (or whatever the answer to the first round was), e.g. 'table'. If correct, the child with the correct answer goes next, e.g. 'I spy something **narrower** than a table… ' (same object as their answer) and the game carries on. Questions alternate between wider than and narrower than.

Rule: You cannot call out an object already used by someone else in the game.

Variation 1: 'I spy with my little eye something that is taller/shorter than a jug,' etc.

Variation 2: 'I spy with my little eye something that is longer/shorter than a pencil,' etc.

Handprint measuring

Give your child an A4 sheet of paper. Help your child trace around his/her hand. He/she can cut out the handprint and use it to measure different objects around the kitchen or anywhere in the house.

Ask him/her to measure the length and width of the table using the handprint. This can be done using one handprint a number of times or he/she can make a number of copies of the original handprint.

He/she should estimate the answer before he/she measures.



Measuring standing jumps



The following can be done in the house or in the porch or garden. Draw a line on the ground or floor with chalk or use a stick or a ruler as a line. Ask your child to do a standing jump (no run up) as far as he/she can.

He/she marks where he/she landed. He/she then uses the handprint from the previous activity to measure the length of the jump. Other members of the family can join in to see who can do the longest standing jump.

Measuring your table

Ask your child to measure the length or width of a table or chair using a pencil or marker. He/she places the pencil on the table, moves it over and counts how many times he/she moved it. He/she could place a Post-it note to remind himself/herself of how many times he/she turned over the pencil or marker. Ask him/her to count the number of times he/she turned over the pencil or marker (to the nearest full/complete number, e.g. 4 and a bit becomes 4). Then ask your child to use a different measure, e.g. a chopstick, spoon or clothes peg.

Ask questions such as: 'Did you need more chopsticks, spoons or clothes pegs than pencils or markers to measure the length of the table? Why was that?'

Paper clip measuring

Give your child some paperclips. Ask him/her to measure the length or width of his/her maths book using the paperclips. He/she should estimate the answers before he/she measures.



Variation: He/she can do the same with different exercise books. You can ask questions, e.g

- How many paperclips longer/shorter was your maths book than your English book?
- Did you think you would need more or less/fewer paperclips than 1p coins to measure the maths book? Now try it with 2p, 5p and 10p coins.

This week, your child will explore numbers to 50 in Chapter 23 of *New Busy at Maths – Year 2*. This builds on and extends the learning introduced in Chapter 5 and 6.

Ten frame numbers

Ask your child to use their ten frame or draw some ten frames. Place up to five ten frames beside each other horizontally across the table. Give your child up to 50 counters of two different colours (any colour will suffice). Call out a number from 20 to 50, e.g. 36. Ask your child to fill three of their ten frames with 10 blue counters on each. They then place six red counters in the fourth ten frame to have 36 = 30 + 6. Do this with any numbers from 20 to 50.

Money numbers



Give your child nine real/plastic 1p coins and five real/plastic 10p coins. Ask your child to play the role of leader/banker. You call out a money number, e.g. 36p. Your child must race to make 36p in two piles of a) three 10p coins and b) six 1p coins.

He/she could also place the 10p coins under each other and the 1p coins under each other.

Notation board numbers

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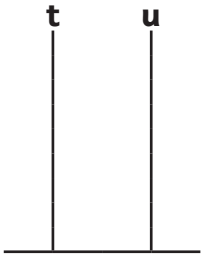
With your child, write the numerals 0–10 on Post-it notes or small pieces of paper. He/she will also need their notation board. Place a numeral card, e.g. 48, under the notation board. Your child must place that number of small red counters in the spaces 1–8 on the notation board – ensure that he/she always starts at the bottom right under the u in the units section. He/she will then place four blue counters in the tens section, starting at the bottom left under the **t** in the tens section.

Ten more/less on the notation board

This can be done with any number from 20–50. Make a number on the notation board, e.g. 35. He/she has to make a number that is ten more or ten less than that number on her/his notation board i.e. 25 and then 45. Be mindful to select starting numbers that do not exceed 50 when ten more is added

Abacus numbers



With your child, draw the blank abacus as shown in the picture for tens and units. He/she will also need a dice and 9 red counters to represent units and up to 4 blue counters to represent the tens. Ask your child to play the role of banker and hold all the counters. Ask your child to roll the dice and see what he/she lands on, e.g. six. He/she counts out that number of red counters. He/she places the 6 counters in the units section of the abacus ensuring to start at the bottom. He/she then rolls the dice a second time to see what he/she gets, e.g. 3. He/she counts that number of blue counters, says the number aloud, and places the 3 counters in the tens section of the abacus.

Ten more/less on the abacus

With your child, use a blank abacus for tens and units as in the activity above. He/she will also need 9 red counters to represent units and up to 5 blue counters to represent tens. You make a number on the abacus e.g. 38. He/she will make a number that is ten more or ten less on her/his abacus, i.e. 48 and then 28. As before, be mindful to select starting numbers that do not exceed 50 when ten more is added.

What's my number?

Give your child one clue as to what the mystery number is, using tens and units in the sentences, e.g. *I have 4 more units than 13. What number am I?; I have 4 tens. My units number is 3 more than my tens number. What number am I?*

Variation: Ask your child to think of a number. He/she makes up some clues and you have to find the mystery number.

This week your child will explore capacity (the amount of liquid a container can hold) in Chapter 24 of *New Busy at Maths – Year 2.*

Your child needs to know the mathematical language associated with capacity: How much? How much more water is needed?, full, half full, empty, more, less, nearly full, holds more, holds less, nearly empty.

Full, empty, more or less

Write the words **Full**, **Empty**, **More** and **Less** on pieces of paper, cardboard or Post-it notes.

Place 4 cups, glasses, plastic bottles of water/rice/spaghetti pieces on the table (each cup, glass, etc., should have a different amount). Ask your child to place the correct word beside each cup, glass, plastic bottle.

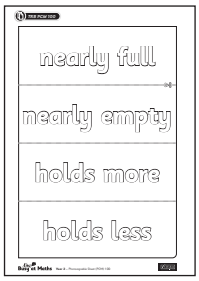
Variation: You can ask your child some questions or he/she can compose questions about the different containers, e.g.

- Which container holds more/the most water?
- Which container has less/the least water?

Nearly full, nearly empty, holds more, holds less:

Write the words **Nearly full**, **Holds more**, **Holds less** and **Nearly empty** on pieces of paper, cardboard or Post-it notes.

Place 5 cups, glasses, plastic bottles of water/rice/spaghetti pieces on the table (each cup, glass, etc., should contain a different amount). Ask your child to place the correct word under each cup, glass, plastic bottle.



Variation: Ask your child to compose their own questions about the different containers, e.g.

- Which container is full/nearly full?
- Which container is empty/nearly empty?

Lunchbox v. bottle

Give your child a packet of rice or pasta, his/her pencil case and a sugar bowl or milk jug. Ask him/her to estimate which item holds more. He/she can use the rice or pasta pieces to justify his/her answer.

Which bottle (similar shapes) holds more?

Give your child about 5 bottles of similar shape. Put different amounts of water in them and ask your child to arrange them in order of which has the most, least, more and less. Ask him/her to tell you why he/she thinks the containers were arranged in that order. Ask some open-ended questions (requiring more than a yes or no answer), such as:

- Why did you put that bottle first?
- Why do you think it holds more than that bottle?
- Why do you think that bottle holds less?

After the discussion, have your child test whether his/her estimations of the capacity of the containers was correct by pouring the water from them into a household measuring jug. If there is no measuring jug to hand, pour the water from the individual bottles into a larger bottle and use a marker to show the amounts that were in each container.

Which bottle (different shapes) holds more?

Give your child 5 or 6 clean, empty bottles that are to hand in the house. The bottles should obviously be of different shapes, but relatively similar in capacity.



This is quite an important experiment as many children wrongly think that the shape of a container determines the actual capacity, i.e. that a tall bottle holds more than a short one.

Ask him/her to arrange them in order of which holds most or least. Ask him/her to tell you why they arranged the bottles in that order. After the discussion, have your child test whether his/her estimations were correct by filling each one with water and then pouring the water from them into a household measuring jug. If there is no measuring jug to hand, pour the water from the individual bottles into a larger bottle and use a marker to show the amounts that were in each of them.

Which box holds more?

Give your child 3, 4 or 5 clean, empty boxes that are to hand in the house. Ask him/her to arrange them in order of which holds most or least. Ask them to tell you why they arranged them in that order.

This week your child will be introduced to subtraction as difference and by counting back in Chapter 25 of *New Busy at Maths – Year 2.*

Mathematical language

Your child will be learning some new maths words and developing their maths vocabulary to include words, phrases and symbols such as:

- subtraction
- subtract _ from _
- the difference between…
- less than
- fewer than
- take away from
- subtraction sign/symbol (–)
- equals sign (=)

Subtraction by difference means that your child does the subtraction by identifying the difference between two quantities, *e.g.* 5 – 3 = 2. The answer may be reached by taking 3 away from 5 to give 2, or simply crossing out the three apples that we want to take away.



Place some apples, cups, mugs or spoons, etc. on the table and give your child some different subtraction questions, *e.g.* 'I have 9 spoons and I put 6 in the dishwasher. How many are not in the dishwasher?'

Subtraction by counting back means starting at one point on the number strip and counting back by the required amount to find the correct answer, *e.g.* 9 – 4 = ?

Start at 9 on a number strip and take away 4 by counting back four spaces. You arrive at 5, so 9 – 4 = 5.



Ask your child questions such as:

- What is the difference between, say, 9 and 4?
- 8 take away 4 will leave?
- If you subtract 4 from 9, what will remain?
- When subtracting, do we count on or count backwards?
- How far back from 9 must I count to reach 5?

Subtraction as difference

Give your child some lollipop sticks, headless matches, straws, leaves. Give them a certain number to count out. Write the numbers beside them. Then ask them to cross out a certain smaller number. Now count the remaining sticks. Ask your child to tell you the difference between the two numbers. Write the numbers in each case. Finish by asking your child to write out the number sentence for each question. For example:



$$\begin{array}{r} 7 \\ -\ 2 \\ \hline 5 \end{array}$$

so, 7 – 5 = 2

Do this also by laying out two rows of leaves – 8 in the top row and 6 in the bottom – in one-to-one correspondence so that you can clearly see which set has more or less. Your child should be able to tell you by observation what the difference between both sets is. It will be obvious from looking at the leaves that there are two more leaves in the top row. Ask questions such as:

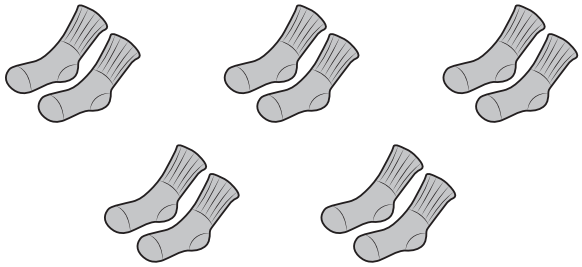
- How many leaves are in the top/bottom row?
- Which row has more leaves?
- Which row has fewer/less leaves?
- How many more leaves are in the top row?
- How many fewer leaves are in the bottom row?

Counting back on a number line for difference is a simple task. First pick a start point to count back from. Count back the number of spaces required each time and this will produce the correct answer.

This week your child will revisit Pattern in Chapter 26 of *New Busy at Maths – Year 2*. This builds on and extends the learning introduced in Chapter 7.

Skip counting

Put sets of matched socks on the table. Get your child to count the socks in pairs i.e. 2, 4, 6, 8, 10 to find out how many socks there are in total. Now try it for pairs of shoes on the shoe rack.

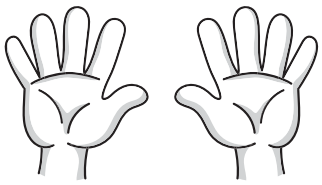


Body parts

Ask your child to observe the other members of the household and to count the eyes, ears, thumbs, hands and feet in twos.

Fingers and toes

Ask your child to look at both yours and their hands and feet. Ask them to count the fingers (thumbs included!) and toes in fives. Include other members of the family, if possible. Try to ensure that your child can count in fives up to a total of 50.



Fridge magnets

Put 10–20 fridge magnets on the table. Ask your child to place the fridge magnets in sets of two first and then in sets of five. They can skip count in twos and fives forwards and backwards.

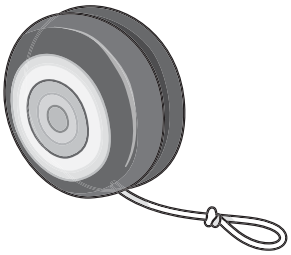
Taking turns

Ask your child to take turns with you when counting in twos from 0 to 50. Start by saying zero (0). Your child says 2, you say 4, and so on up to 20, 30, 40, 50. Tell your child that you will repeat the activity but that this time you will start at 20 and count back to zero, e.g. 20, 18, 16, etc. Have your child start this time at 30. Make the game more difficult by starting at 40 or 50. Do the same activity, taking turns counting in fives. For example: Your child says 5, you say 10, and so on up to 20, 30, 40, 50. To make the activity a little more difficult, start at 30 and count backwards to zero (0). To make the game even more difficult, start at 40 or 50.

Yo-yo counting

Swing a yo-yo slowly in front of your child. If a yo-yo is not available, tie a beanbag or ball of paper to a piece of string and swing it gently like a pendulum. Ask your child to count forwards in twos in time with the yo-yo swings, beginning at various points.

Then invite your child to count backwards in twos from different points, e.g. 6, 12, 18, 24, etc. Remember it is more difficult to ask your child to count in twos starting at an odd number, e.g. 11, 15, 19. Do a similar activity when counting in fives and tens.

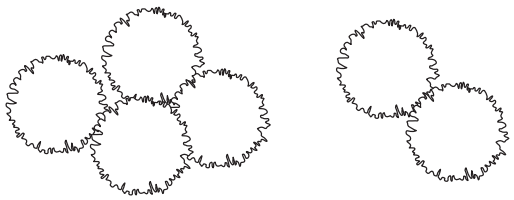


Count in 10s challenge

Take turns counting forwards and backwards in 10s. Start at zero (0), then try different starting numbers such as 10, 20, 30 or 40. Can your child count all the way to 100 and back again? Make it more fun by tossing a ball to each other and saying the next number each time you catch it.

This week your child will revisit Place Value in Chapter 27 of *New Busy at Maths – Year 2*. This is an extension of the work explored in Chapter 23.

Pom pom place value



Give your child some small objects of two different types, e.g. pompoms and buttons. Explain that one type will represent tens and the other will represent units. Write some numerals from 21 to 50 on pieces of paper or Post-it notes and place them face down on the table. Ask your child to turn over a number and make that number using the objects. For example, for 43, they use four pompoms to represent 4 tens and three buttons to represent 3 units. Ask your child to say the number and explain how many tens and units it has. Do this with different numbers from 21 to 50.

Ten frame challenge

Give your child some interlocking cubes and up to five ten frames, or ask them to draw some ten frames. Make a number between 21 and 50 on the ten frames using the cubes. Cover the ten frames, then uncover them for a few seconds so your child can look carefully at the cubes before covering them again. Ask your child to estimate how many cubes they saw and explain how they worked this out. Encourage your child to look for full groups of ten and any extra units, rather than counting each cube individually. For example, if your child sees two full ten frames and five extra cubes, they can recognise this as 2 tens and 5 units, making 25. Uncover the ten frames and count the cubes together to check the answer. Repeat the activity with different numbers. Once your child is confident, ask them to make the number while you estimate before counting together. Take turns!

Ten more/less on the notation board

With your child, draw a blank notation board for tens and units. Give your child nine red counters to represent the units and up to five blue counters to represent the tens. Make a number on the notation board, e.g. 32. Ask your child to make a number that is ten more or ten less on their notation board, i.e. 42 and then 22.

Do this with any of the numbers from 20 to 50, but do not go beyond 50 at this time.

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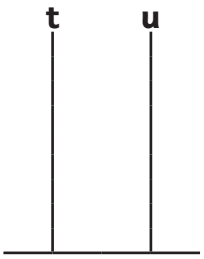
Ten more/less on the abacus



With your child, draw a blank abacus for tens and units. Give them nine red counters to represent the units and up to five blue counters to represent the tens. Make a number on the abacus, e.g. 40, and ask your child to make a number that is ten more or ten less on their abacus, i.e. 50 and then 30. Do this with different numbers and again, be mindful to select starting numbers that do not exceed 50 when ten more is added.

Make and change

Ask your child to use the notation board made earlier. Use small objects such as beads to represent tens and buttons to represent units. Make a number on the notation board, e.g. 34. Ask your child to add or remove some units and say what the new number is. If, when adding units, you go beyond 9 and reach 10, remove the 10 units from the notation board and exchange them for one ten. Place the new ten in the tens section of the notation board. For example, if you add six units to 34, the ten units can be exchanged for one ten, so the new number is 40. If your child removes four units from 34, they can show 30. Continue with different numbers.

Number detective

Give your child a clue to a mystery number using tens and units. For example: "I have 3 tens. I have 5 units. What number am I?" Your child works out the number and explains how they know. Try different clues using numbers from 20 to 50, then swap roles and let your child make clues for you to solve.

This week your child will explore all the coins up to 20p in Chapter 28 of *New Busy at Maths – Year 2*.

Coin sorter!



Give your child some real 1p, 2p, 5p, 10p and 20p coins. Ask them to sort the coins into sets of 1p, 2p, 5p, 10p and 20p as quickly as possible. Have your child sort them into piles on separate plates or onto sheets of paper.

Variation: Ask your child to write the number of coins (not the total value) under each set of coins.

Totals to 20p

Give your child some real 1p, 2p, 5p, 10p and 20p coins. Ask them to come up with as many different ways to make a total of 20p. Draw or count out the coins. For example: (a) 10p, 5p, 2p, 2p, 1p; (b) 10p, 2p, 2p, 2p, 2p, 2p; (c) 10p, 10p; (d) 5p, 5p, 5p, 5p, etc.

Variation: Ask your child to record the different ways of making totals of 20p on a blank sheet of paper or on their whiteboard.

Target numbers

Again, give your child some real 1p, 2p, 5p, 10p and 20p coins. Ask them to roll or throw two nine-sided dice. If they roll, e.g. a 9 and an 8, they must add the two numbers to get a total of 17p. Ask them to make that target amount using the fewest coins, 10p + 5p + 2p.

Variation: Have your child roll three six-sided dice. If they get, e.g. a 5, a 5 and a 6, they add the three numbers to get 16p and must make that target amount using the fewest coins, i.e. 10p + 5p + 1p.

Trading up!

Play the role of banker yourself in the following game. Place at least 20 x 1p coins, 10 x 2p coins, 10 x 5p coins, 10 x 10p coins and 5 x 20p coins in front of you. Use this as the bank or cash register. Ask your child to roll or throw a nine-sided dice, if possible. If they roll a 6, give them that number of coins, e.g. 1p + 1p + 1p + 1p + 1p + 1p. Invite your child to now trade up the coins for higher denominations. They must ask you: 'I want to trade up my six 1p coins for 5p and 1p.'

Continue playing and if your child rolls, e.g. a 5, you, the banker, give them the five 1p coins. Invite your child to now trade them up for higher denominations. They already have 5p and 1p, so now have a total of 11p. They should ask you: 'I have 5p and six 1p coins. I want to trade up my six 1p coins for 5p and 1p. That means that I have two 5p coins and one 1p coin, so I would like one 10p coin.' Play continues in this way. The next roll could be a 6, so they now have 17p, which can be traded for 10p + 5p + 2p. The next roll could be 5, so they now have 22p, which should be shown as: 10p + 10p + 1p + 1p and further traded up for 20p. Continue the game until they have two, three, four or five 20p coins.

Let's go shopping!

Give your child some real 1p, 2p, 5p, 10p and 20p coins. With your child, make some price tags showing prices from 1p to 20p, using Post-it notes or pieces of paper card. Include the following: pencil = 15p; ruler = 16p; marker = 14p; crayon = 10p; biscuit = 12p; pineapple = 13p; pear = 8p; apple = 9p; orange = 7p; sweet = 4p, etc. Ask your child to draw each item on the price tag or on the back of it. Place the price tags face down on the table. Invite your child to turn over a price tag and make the amount of money needed to buy that item. If the marker is turned over, they can make the 14p as follows: 10p + 2p + 2p. Encourage them to always use the fewest number of coins.

Let's give change!

Use the marker from the previous activity and let your child play the role of shopkeeper. Give the marker a price tag of 14p and a 20p coin to your child, who has to give you the correct change. Ensure your child gives you the correct change of 6p using the fewest number of coins, i.e. 5p + 1p.

Variation: Swap roles with your child. They can buy two or more items and receive change from 20p.

This week your child will be introduced to non-standard units of measuring weight in Chapter 29 of *New Busy at Maths – Year 2.*

Weight names

Your child needs to know the language of weight, e.g. light, lighter, lightest, heavy, heavier and heaviest. Write these six words on pieces of paper or on cardboard.

Ask your child to source three objects in the house and to order them by weight from lightest to heaviest. He/she can put the proper weight name (light, lighter, lightest, heavy, heavier and heaviest) under the different objects.

Variation 1: Now ask him/her to order them from heaviest to lightest.

Variation 2: Increase the number of objects to be weighed to 4, 5, 6. Use a balance or a kitchen weighing scales to test if your child's estimates were correct.



Comparing weights

Give your child three shoe boxes or baskets and a large variety of objects to compare weights, e.g. a toy car, a teddy, a cube, a pebble, a marble, a Lego brick, a shoe, a paper clip, a marker and a stone. Ask him/her to say which object is lighter/heavier, etc.

Variation: From activity 1 earlier ask your child to write the correct weight word, and place it on the appropriate box.

How many cubes?

Give your child some cubes or Lego bricks and four small objects to weigh using a (bucket) balance. Items to use could be: Pritt stick, scissors, rubber, sharpener, paperclip, crayon, pencil, stapler, pencil case, etc.

Ask him/her to estimate the answer first. When he/she has weighed the four items, ask him/her to line up them up from lightest to heaviest.

Variation: You may increase or decrease the number of items to be weighed.

Weighing using lollipop sticks

Give your child some lollipop sticks. Ask him/her to place a pencil on the (bucket) balance. You can ask: 'How many lollipop sticks does your pencil weigh?'

Ask him/her to estimate the answer first and to write the estimate on the mini whiteboard or a piece of paper. Then get him/her to weigh the pencil to verify the answer.

Variation: Ask your child to weigh three or four different pencils and to line them up from lightest to heaviest and then from heaviest to lightest.

Which is heavier?

Give your child some objects that look the same but have different weights and two shoe boxes. Place some light objects in the second box, e.g. leaves, cotton wool, playing cards, socks, gloves, etc., but place some pebbles or stones in the other. Ask your child to estimate which box is heavier or the same weight. Ask him/her to test the results by handling the boxes.

Variation: Place a small stone in one box with a small stone and some feathers or cloth in the other. Ask your child to estimate which box is heavier. Most children tend to think that the box with the bulkier amount will be heavier. Generally speaking, the box with the stone will be heavier.

Do they weigh the same?

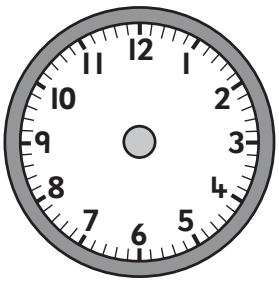
You will need three identical empty containers that you cannot see through, e.g. butter tubs, cereal boxes. Fill each container so that one is the lightest (e.g. cotton wool), one is heavier (e.g. cubes) and one is the heaviest (e.g. marbles). Ask your child questions, such as the following to determine what he/she perceives about the containers, e.g.:

- What type of containers do you see?
- Are they all the same size or different sizes?
- Do you think they weigh the same?
- If they do not weigh the same, why might this be?
- Do you think each container is full or empty?
- What might be inside the containers?
- How can we find out if they weigh the same?

Now invite your child to lift up the containers and to order them from lightest to heaviest.

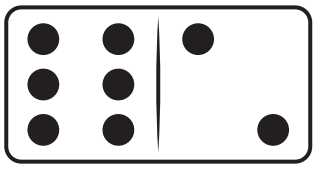
This week your child will be introduced to reading the analogue and digital clocks using half-hour intervals in Chapter 30 of *New Busy at Maths – Year 2.* This is an extension of the Time work covered in Chapter 19.

Dice half-hours!



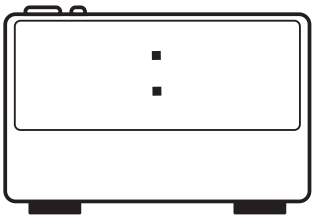
Give your child a real clock or the clock face they made in Chapter 19. They will also need two six-sided dice. Ask them to start by rolling one dice so they are only dealing with the hours 1–6. If they roll a 4, they now race to show half past the hour of the dice number on the clock, i.e. half past 4. After doing a number of questions using one dice, ask them to roll the two dice and to add them to get the total, e.g. a 4 and a 3 to get 7. They now race to show half past the hour of the two dice total on the clock, i.e. half past 7.

Domino half-hours!



Give your child a real clock or the clock face that they made in Chapter 19. They will also need about 15/20 dominoes. Try to ensure that there are dominoes showing all numbers from 1 to 12, if possible. Place the dominoes face down in the middle of the table. Ask your child to pick a domino, e.g. one showing 6 dots and 2 dots. They have the option of adding or subtracting the two numbers, e.g. 6 + 2 = 8 or 6 – 2 = 4. Let your child decide and say what half hour they are going to show on the analogue clock face – half past 8 or half past 2. Note that this game is designed to help your child with both addition and subtraction while also dealing with time in half-hour intervals.

Make the digital time!



Write or show any half-hour analogue time on a real clock or the clock face made in Chapter 19, e.g. half past 6. Ask your child to show that time (half past 6) as 6:30 on the digital clock made in Chapter 19. Take turns with your child showing different half-hour times on the analogue clock and making them on the digital clock until all numbers 1–12 have been completed.

Make the analogue time!

Similar to the previous activity, write or show any half-hour digital time on a real digital clock or the clock face made in Chapter 19, e.g. 6:30. Ask your child to show that time (6:30) as half past 6 on the analogue clock made in Chapter 19. Take turns with your child showing different half-hour times on the digital clock and making them on the analogue clock until all numbers 1–12 have been completed.

At what time do you do this?

Write out some or all of the statements below on pieces of paper or Post-it notes. Or else simply read out the activities. Place the statements face down on the table. Invite your child to turn over a statement and read it out. They should show the approximate time that they do this activity to the nearest half-hour. For example: 'I eat my breakfast' could be shown as half past 7.

(a) I wake up in the morning.

(b) I eat my breakfast.

(c) I go to school.

(d) We have break in school.

(e) We have lunch in school.

(f) School finishes.

(g) I eat my dinner.

(h) I do my homework.

(i) I go to bed.

(j) I go to scouts, swimming, football, etc.

(k) I visit my friend, etc.

This week your child will continue learning about subtraction in Chapter 31 of *New Busy at Maths – Year 2.* This builds on and extends the learning introduced in Chapter 25.

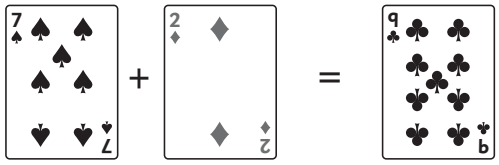
Equal towers

Build a tower of up to 10 Lego blocks yourself using just two colours, e.g. 5 red and 5 yellow. Ask your child to build a tower of equal size using a different colour and amount, e.g. a tower of 8, with 4 blue and 4 red. Get them to build another tower with 2 blue and 6 pink, etc.

Variation: Build a tower of seven cubes yourself. Ask your child how many short of 10 cubes is your tower. Get them to write the subtraction number sentence:

$$10 - 3 = 7$$

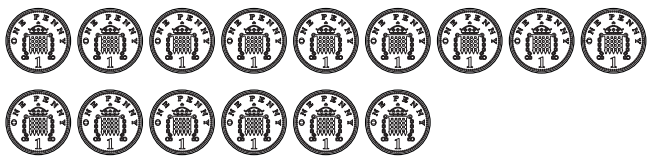
The hidden card



Give your child a pack of playing cards. Ask them to remove all the court cards and use the ace card as 1 and the joker as zero (0). Invite them to make a playing card number sentence on the table, e.g. 7 + 2 = 9. Ask your child to close their eyes or turn around. Place one of the cards upside down and ask them: 'What number is turned upside down?' Do this with a selection of number sentences.

Variation: Make the game more difficult by using three cards, e.g. 2 + 3 + 1 = 6, and remove one card.

Rows of coins (subtraction)



Place a row of up to ten 1p coins on the table, e.g. nine coins. Ask your child to place a row of six 1p coins directly under the row of nine coins, so they can clearly see the difference between the two rows. Now ask questions or allow your child to compose their own questions such as: How many coins are there in the top row? How many coins are there in the bottom row? Which row has more coins? Which row has less/fewer coins? How many more coins are there in the top row?

Subtracting playing cards

Play this game with two to five family members, if possible. Give each player 10 playing cards and ask them to keep them in a pile face down on the table. Ask Player A to turn over the top two cards and subtract the smaller number from the bigger number. For example, if Player A turns over a 7 and a 10, they take 7 from 10 to get 3. If the answer is correct, give them a cube, counter or coin. Player B does the same. Continue playing this way until all the cards are turned over. Whoever has the most cubes at the end of the game is the winner.

Number line subtraction



Ask your child to place their number line on the table. Write some subtraction questions on Post-it notes or pieces of paper, e.g. 9 – 6 = ?. Ask your child to place a counter, button or Lego block on the bigger number (9) and to count back six places on the number line. Ask questions such as: Where were you at the start? How many spaces did you go back? On what number did you land? So, 9 – 6 = 3. Other questions could be:
(a) 8 – 4 = ? **(b)** 7 – 2 = ? **(c)** 10 – 4 = ?
(d) 9 – 1 = ? **(e)** 7 – 0 = ? **(f)** 10 – 2 = ?

Do I add (+) or subtract (–)?

Give your child a number of simple word problems that require either addition (+) or subtraction (–).

(a) I had three stamps. I bought five stamps at the post office. How many stamps had I then?

Ask questions such as: Had I more or fewer stamps then? Would it be a good idea to subtract? Why would it be a better idea to add?

(b) I had eight eggs. I used five eggs to make a cake. How many eggs had I then?

(c) Omar read four books. Ami read five books. How many books did they read altogether?

This week your child will be introduced to fractions – half ($\frac{1}{2}$) in Chapter 32 of *New Busy at Maths – Year 2*.

Game: Cut the apple

Explain to your child that you are going to give them a piece of an apple, orange, a circular piece of paper, or cupcake, pizza, etc. Cut the apple/cupcake so that one piece is much bigger than the other. Ask your child to choose which piece they would like. More than likely, they will want the larger piece and would feel it unfair to get the smaller piece. Explain to your child that you have a solution to the problem. Take out another apple/cupcake. Explain that they will cut the apple/cupcake, but that you will choose which piece they will get. This will encourage your child to make the pieces as equal as possible. Do this activity using other items that your child likes. Try to use healthy foods, where possible. Encourage your child to use the word half/halves at this stage.

Making half

Activity 1: Give your child a sheet of paper. Ask them to fold it in two equal pieces (half). Help them to make sure both halves are equal and to colour both halves in different colours. Then ask them to explore more than one way of making half, e.g. corner to corner or down the centre, etc.

Activity 2: Ask your child to fill a glass with water, sand, peas or pasta shells so that it is (roughly) half-full. Ask them to explain why they think that it is half-full.

Activity 3: Ask your child to make shapes out of playdough – regular shapes would be best at this time. Encourage them to cut each shape in half.

Sharing equally

Activity 1: Get an even number of items, e.g. pasta shells, to share between two teddies or plates. Give each teddy an unequal share, e.g. 2 vs 4, and ask your child if it is fair. Then give your child the pasta and ask them to share them equally and to ensure both teddies have the same amount. Try it for different amounts up to 20 and get your child to work out if the teddies each have half or an equal share.

Activity 2: Get some items for sharing, e.g. lollipop sticks, marbles, cubes, counters, fruit, etc. Explain to your child that you have 10 marbles in your hand and you want to give half to them and keep the other half yourself. Share the marbles between you: one for you and one for me, until all the marbles are gone. Ask your child some questions such as:

- How many did you get?
- How many did I get?
- Did we get the same amount?
- Did I share the marbles equally?
- How many marbles are there altogether?
- So, what is half of 10?

Continue with many other examples using different objects and different totals. Start with small totals to help them understand the concept.

Activity 3: Place up to 20 cubes, coins or buttons, etc. on the table. Put two plates, saucers or cups, etc. in the centre of the table. Tell your child that they can find half of a number by sharing the cubes equally, e.g. find half of 14. Have your child count out the 14 cubes. Then have them share the 14 cubes equally between the two plates, saucers or cups, etc. Ask the following types of questions:

- How many cubes are on the left/first plate?
- How many cubes are on the right/second plate?
- Did you share the cubes equally?
- So, what is half of 14? (Yes, 7 is half of 14.)

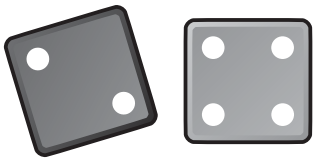
Continue with other examples of sharing items up to a total of 20.

Butterfly symmetry

Draw a simple picture of a symmetrical butterfly on a piece of paper. Ask your child to fold the butterfly in half down the line of symmetry. They can then open the butterfly again. Invite them to put blobs of paint on one side of the butterfly. They must then fold the butterfly in half, along the line of symmetry, rubbing the dry half of the page against the painted half. They can unfold the butterfly to reveal their symmetrical design.

This week your child will revisit money in Chapter 33 of *New Busy at Maths – Year 2.* This builds on and extends the learning introduced in Chapter 28.

Coins in the pond



Give your child a wide selection of real 1p, 2p, 5p, 10p and 20p coins. They will also need two six-sided dice. Place all the coins inside a large circle, e.g. a mini hula hoop, a tray or cardboard plate, etc. Play the role of banker yourself. Ask your child to throw the dice and count the total, e.g. a 6 and a 5, to give a total of 11p. Your child asks you, the banker, for that amount of money, which has to be given using the fewest number of coins. Ensure they specify how they want the money, e.g. 10p and 1p. Continue playing until no more coins can feasibly be selected from the pond, given the combinations remaining.

Variation: Use three six-sided dice where larger numbers can be made, e.g. two 6 and a 5, which are added to make 17p.

Target counting using dice

To practise using the number line 0–10, ask your child to place their number line on the table. Give them a dice and some counters or cubes. Call out any target number between 1 and 10, e.g. 7. Ask your child to roll one dice. If they throw a 4, they place their counter at zero (0) on the number line and count up to land on 4. They then have to get to the target of 7 by rolling a 3 and counting on 3. If they roll any number other than a 3, they lose a turn. If your child reaches the target number correctly, they must say 'I must count on 3', and they win a cube or counter. Take a turn yourself by rolling the dice and winning a cube or counter in the same manner.

Variation: Play the same game using dominoes, having first removed the domino totals of 11 and 12.

Roll and count the change



Give your child a six-sided dice. Play the role of the customer yourself, while your child plays the role of shopkeeper. Keep a real 10p coin for yourself. Ask your child, the shopkeeper, to roll the dice to decide how much money you have to pay them, e.g. 6p. Hand the 10p coin to your child, who gives you change of 4p, using the counting up method: 6p + 2p + 2p = 10p, so they hand you back 4p change.

Extension: Give your child a nine-sided dice so more numbers can be used and the counting on can be done on the number line 1–20.

Shopping and change

With your child, make some price tags showing prices ranging from 1p to 10p, using Post-it notes or pieces of paper card. Include the following: apple = 2p; pear = 1p; orange = 4p; pineapple = 5p; strawberry = 3p; tomato = 6p; banana = 7p; melon = 9p; pizza = 12p; popcorn = 14p. Play the role of the customer yourself, while your child can play the shopkeeper. Give your child some real 1p, 2p, 5p, 10p and 20p coins to act as the bank or cash register. Place the price tags face up on the table. Start off by picking one item costing less than 10p, e.g. the tomato at 6p. Hand the price tag and a 10p coin to your child, the shopkeeper. They must take the money and give you the correct change of 10p – 6p = 4p. Do this with a number of other questions needing change from 10p. Next pick an item that costs more than 10p, e.g. the popcorn at 14p. Hand the price tag and a 20p coin to your child, who must take the money and give you the correct change of 20p – 14p = 6p. They can use the number line 1–20 to help if encountering difficulty.

Extension: Pick two price tags and add the prices, e.g. a banana costing 7p and an apple costing 2p: 7p + 2p = 9p. Ask your child to calculate the change needed from 20p.