

Schofield&Sims

# Notes for parents and carers

These answers are provided to accompany the **Maths Practice Year 1 Question Book**, which is part of the **Schofield & Sims Primary Practice Maths** series. Answers for all books in the series can be downloaded from the **Schofield & Sims** website.

## The structure

This PDF contains answers for every question in the book. Navigate the PDF document by clicking on the hyperlink for the desired topic in the Contents page. Questions are presented in the order they appear in the book.

In most units, explanations are included for each set of questions to support understanding of the objective being covered. These explanations may suggest methods for working through each question. Explanations are also supplied for questions that children may find particularly challenging. Question number references have been added to answers when explanations from earlier questions may aid understanding.

In the 'Final practice' section, explanations have been provided for every question. Marking guidance is provided alongside the explanation to demonstrate how to allocate partial and full credit for work as applicable.

## Using the answers

Encourage children to work through each question carefully. They should begin by reading the question thoroughly and identifying key terminology before forming their answer.

Although units have been included with these answers to aid understanding, note that children do not need to write the units in their answers for the answers to be marked correct unless it is specified in the question that units should be included.

Some questions in the **Maths Practice Year 1 Question Book** have multiple answers. The explanations accompanying the answers in this document indicate where this is the case. For these questions, accept any possible answers according to the limits laid out. There is no preference for any examples provided in this document over other possible answers not listed and no preference for answers listed first.

Where children have given an answer that is not correct, it may be useful to work through the question with them to correct any misunderstandings.

## Marking the 'Final practice' section

The timing for the 'Final practice' section is intended as a guide only. Some children may prefer to work through the section with a longer time limit or without a time limit.

The marking guidance for some questions indicates that children may receive one mark for a correct method that would lead to a correct answer. This is intended to recognise ability in cases where children have used the correct method but have made a calculation error that has led to the use of incorrect figures in their calculation.

After completing the 'Final practice' section, children may choose to revise topics that they have identified as challenging. If they are comfortable with the material already covered, you may wish to print out and award the editable certificate from the **Schofield & Sims** website to recognise their achievement. The child may then wish to advance to the **Maths Practice Year 2 Question Book**.

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## Numbers and counting (pages 4–5)

#### **Practise**

1. a.



When counting in steps, the difference between two numbers in the sequence is the same. Calculate the difference between the first two numbers (1 and 2). To do this, complete the subtraction 2 - 1 = 1. The step size between the numbers is 1, so add 1 to the previous number. 2 + 1 = 3. 3 + 1 = 4. 4 + 1 = 5. 5 + 1 = 6. Check the answer by counting the strawberries below.



## Extend

**2.** 10 15 20

Count along the number line. The step size between each number is 1. Add 1 to the number before each missing number. 9 + 1 = 10.14 + 1= 15. 19 + 1 = 20.

**3.** (45) (23) (38) (47) (37) (30) (29) (33) (22) (24)

## Apply

4.

1	2	3	4	5	6	7	8	q	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	qq	100

## Counting one more or one less (pages 6–7)

## Practise

1. a. 5

Find 4 on the number line. Add 1. 4 + 1 = 5.

- **b.** 2
- **c.** 7 Find 8

Find 8 on the number line. Subtract 1.8 – 1 = 7.

**d.** 2

2.

**a.** 2

'One more' means add 1. 1 + 1 = 2. Use the number line in **Question 1** to help.

- **b.** 5
- **c.** 2

Here, the number that is one more is already filled in. Remember that the opposite of one more is one less. Work out one less to find the original number. 'One less' means subtract 1. 3 - 1 = 2.

- **d.** 9
- e. 6
- f. 6

#### Extend

3. a. 7 9

- **b.** 1 2
- **c.** 9 10
- 4. a. 6 7

Find one more than the number in the lefthand column first. Then use the new number to find one more again. Use the number line in **Question 1** to help.

**b.** 3 4

# Apply

## 5. a. 4

Read word problems carefully and identify the numbers and operations needed. 'More' means add. Complete the calculation. 3 + 1= 4.

b. 7

'Less' means subtract. 8 - 1 = 7.

## Numbers 1-20 (pages 8-9)

## Practise



## Extend

- 2. a. 11 eleven
  - Count the tens (1 ten = 10). Count the ones (1 one = 1). Combine the tens and ones (10 + 1 = 11). Write the number in numerals and words. Writing a number in numerals means writing it using the digits 0 to 9.

**b.** 13 thirteen **c.** 16 sixteen

- d. 12 twelve
- **3.** 0, 5, 9, 10, 13

## Apply



This birthday card has a numeral with 1 ten and 8 ones. This is the number eighteen.

#### 5. twenty

There are 2 tens and 0 ones. This is the number twenty.

## Representing numbers (pages 10-11)

#### Practise

1. a. 5

There are 10 spaces on this ten-frame. Count the number of counters. There are 5 counters. This ten-frame represents the number 5.

- **b.** 9
- c. 7

#### 2. a. 8

Count the number of beads on the string. There are 8 beads.

- **b.** 12
- **c.** 10
- 3. a. 12

Count the number of tens beads. There is 1 ten bead, which equals 10. Count the number of ones beads. There are 2 ones beads, which equals 2. Combine the tens and ones. 10 + 2 = 12.

- **b.** 19
- **c.** 15

## Extend

4. a. <mark>5</mark>

In a part–whole model, the whole is equal to the parts. The known parts are 4 and 1. Add them together to find the whole. 4 + 1 = 5.

b. 7

5.



Identify the number shown by each picture. The beads, the counters and the part–whole model all represent 4. The blocks represent 6.



Identify the number shown by each picture.

The ones counters, the abacus and the die all represent 6. The tens counters represent 60.

## Apply

## **6.** (Both)

Mia has used 1 ten rod and 3 ones cubes to make 13. 10 + 3 = 13. Jack has used 1 packet of 10 sweets and 3 individual sweets to make 13. 10 + 3 = 13.

# More than, less than and equal to (pages 12–13)

## Practise

1. a.

2.



Count the number of each type of shell in the picture. There are 9 of the first type of shell and 12 of the second type of shell. 12 is more than 9.





Use the method used in **Question 1**.



## Extend

#### 3. a. less

Compare the numbers in the sentence using the number line. 6 is to the left of 10, which means that it is smaller. 6 is less than 10.

<b>b.</b> more <b>c.</b> more <b>d.</b> les
---

4. a. >

Remember that < means 'less than' and > means 'more than'. 12 has one ten and 2 ones. 8 has no tens and 8 ones. Since 8 has no tens and 12 has one ten, 12 is greater than 8.

b. < c. < d. > e. > f. <

## Apply

```
5. 16, 17 or 18
```

Read word problems carefully and identify the numbers and operations needed. Work out how many lollies Mason has. 14 + 1 = 15. Work out how many lollies Henry could have. Henry has more than 15 lollies. Henry has less than or equal to 18 lollies. Henry could have 16, 17 or 18 lollies. It may help to use a number line.

## Counting in steps of 2 (pages 14–15)

## Practise

#### 1. a. (even)

Circle the shoes in pairs of two. Each pair is an even number. There are no shoes left over, so the number of shoes is even.

**b.** (odd)

## 2. a. 8

Each bike has two wheels. Count the bikes in steps of 2 (2, 4, 6, 8) to work out the number of wheels. Check the answer by counting the wheels individually.

**b.** 18

## Extend

#### **3. a.** 8 10 12

The steps between the numbers in the number track are steps of two. Add 2 to the last number in the number track. 6 + 2 = 8. Keep adding 2 until the number track is full. 8 + 2 = 10.10 + 2 = 12.

**b.** 16 18 20





Add 2 to the previous number on the number line to find the missing numbers.



Subtract 2 from the previous number on the number line to find the missing numbers.

## Apply

5. a. 20

Count in pairs of socks (twos) using the picture to help. 10 pairs of socks is the same as 20 socks.

**b.** 18p

# Counting in steps of 5 (pages 16–17)

## Practise

1. a. 20

Count in fives using the picture to help. 4 starfish with 5 arms each is the same as 20 arms.

- **b.** 35
- **c.** 25
- **2. a.** 40p

Use the method used in **Question 1**. 8 coins worth 5p is the same as 40p.

**b.** 50p

## Extend

**3. a.** 20 25 30

The steps between the numbers in the number track are steps of five. Add 5 to the last number in the number track. 15 + 5 =20. Keep adding 5 until the number track is full. 20 + 5 = 25. 25 + 5 = 30.

**b.** 35 40 45



Add 5 to the previous number on the number line to find the missing numbers.



Subtract 5 from the previous number on the number line to find the missing numbers.

# Apply

5. a. 50

Use the method used in **Question 1**. 10 packs of 5 cards is the same as 50 cards.

**b.** 30p

# Counting in steps of 10 (pages 18–19)

## Practise

1. a. 40

Count in tens using the picture to help. 4 boxes of 10 eggs is the same as 40 eggs.

- **b.** 60
- **c.** 70
- **2. a.** 50p

Use the method used in **Question 1**. 5 coins worth 10p is the same as 50p.

**b.** 20p

## Extend

## **3. a.** 40 50 60

The steps between the numbers in the number track are steps of 10. Add 10 to the last number in the number track. 30 + 10 = 40. Keep adding 10 until the number track is full. 40 + 10 = 50.50 + 10 = 60.

## **b.** 80 90 100





Add 10 to the previous number on the number line to find the missing numbers.



Subtract 10 from the previous number on the number line to find the missing numbers.

## Apply

5. a. 40

Use the method used in **Question 1**. 4 boxes of 10 oranges is the same as 40 oranges.

**b.** 100p or £1

# Number bonds to 20 (pages 20–21)

## Practise

- 1. a. 5
  - A full ten-frame is equal to 10. Count the number of counters on the ten-frame. There are 5 counters. Subtract the number of counters from 10 to find how many more counters need to be added. 10 5 = 5.
  - **b.** 2
  - **c.** 1
  - d. 4
- 2. a. 7

Identify the whole. The whole is equal to 10. The whole is equal to the parts. Identify the known part. The known part is 3. Subtract the known part from the whole to find the missing part. 10 - 3 = 7.

#### **b.** 10

Identify the whole. The whole is equal to the parts. Identify the known parts. The known parts are 5 and 5. Add the parts to find the whole. 5 + 5 = 10.

## Extend



## Apply

#### 4. a. 16

Count the number of ones counters. There are 4. Subtract 4 from 20 to find the value of the star. 20 - 4 = 16.

**b.** 12

Count the number of ones counters. There are 8. Subtract 8 from 20 to find the value of the heart. 20 - 8 = 12.

## 5. a. <mark>8</mark>

Read word problems carefully and identify the numbers and operations needed. Subtract the number of red pencils from the total number of pencils. Complete the calculation. 20 - 12 = 8.

**b.** 20 **c.** 16

## Adding one-digit numbers (pages 22–23)

#### Practise

1. a. 8

Find the total by counting how many dots there are altogether on both dice.

#### **2.** 8 + 4 = 12

Count each group of strawberries and write the numbers into the number statement. 8 + 4. Add the parts together by counting all the strawberries in both groups. 8 + 4 = 12.

## Extend

**3.** α. 11

Find the first number in the calculation on the number line. This is 6. Count on 5. Do not count the starting number again. The fifth number is the answer to the calculation.



4. a. <mark>4</mark>

Identify the whole. The whole is equal to 12. The whole is equal to the parts. Identify the known part. The known part is 8. Subtract the known part from the whole to find the missing part. 12 - 8 = 4.

b. 7

## Apply

5. a. 17

Read word problems carefully and identify the numbers and operations needed. 'In total' means add. Add together the footballs and the rugby balls. 8 + 9 = 17.

**b.** 13 **c.** 12

# Subtracting one-digit numbers (pages 24–25)

## Practise

- a. 7 Count how many pears are left. 9 - 2 = 7.
  - **b.** 5
  - **c.** 5
  - d. 1

#### **2. a.** 9 - 3 = 6

Count how many ice lollies there are altogether. Write 9 in the first space in the calculation. Count how many ice lollies have been crossed out. Write 3 in the second space in the calculation. Count how many ice lollies are left. Write 6 in the answer space.

**b.** 8 - 4 = 4

## Extend

#### 3. a. 2

Find the first number in the calculation on the number line. This is 8. Count back 6. Do not count the starting number again. The result is the answer to the calculation.



4. a. 5

Identify the whole. The whole is equal to 9. The whole is equal to the parts. Identify the known part. The known part is 4. Count how many counters would need to be subtracted from the whole to leave the known part. This is  $5 \cdot 9 - 5 = 4$ .

**b.** 4

## Apply

5. a. 7

Read word problems carefully and identify the numbers and operations needed. 'Left' means subtract. Subtract the eaten oranges from the total oranges. 9 - 2 = 7.

- b. 2 blocks
- **c.** 5

# Adding two-digit numbers (pages 26–27)

#### Practise

a. 17
 Find the total by counting how many blocks there are altogether. 13 + 4 = 17.

- **b.** 18
- a. 14 + 5 = 19
  Count the number of pencils in each part.
  14 + 5. Add the parts together. 14 + 5 = 19.

**b.** 12 + 3 = 15

## Extend

#### 3. a. 19

Find the first number in the calculation on the number line. This is 16. Count on 3. Do not count the starting number again. The result is the answer to the calculation.



6

Find the missing number in the second row by adding the two blocks below it. 3 + 6 = 9. The missing number in the second row is 9. Now find the missing number in the top row by adding the two blocks below it. 9 + 8 = 17. The missing number in the top row is 17.

2

6. a. 15

3

Read word problems carefully and identify the numbers and operations needed. Add the people getting on the bus to the people already on the bus. 13 + 2 = 15.

**b.** 17

# Subtracting two-digit numbers (pages 28–29)

#### Practise

**1. a.** 15

Count how many cans are not crossed out.

**b.** 9

Count the whole number. Write 19 on the first line. Count the number crossed out. Write 5 on the second line. Count the number left. Write 14 on the last line. 19 - 5 = 14.

**b.** 20 - 4 = 16

## Extend

#### 3. a. 11

Find the first number in the calculation on the number line. This is 14. Count back 3. Do not count the starting number again. The result is the answer to the calculation.



4. a. 6

There are 18 counters in total on the tenframe. 12 are shaded dark red. 6 are shaded light red. Count how many counters would need to be removed to leave 12. 18 - 6 = 12.

**b.** 4

## Apply

5.



Find the number in the middle box first as there is only one unknown number in the middle column. Add 8 and 7, then subtract the result from 20. 8 + 7 = 15. 20 - 15 = 5. The missing number in the middle box is 5. Now find the missing number in the left-hand box by repeating the same process. 5 + 11 = 16. 20 - 16 = 4.

#### **6.** 8

Read word problems carefully and identify the numbers and operations needed. Add the number of green and orange tomatoes. Then subtract the total number of green and orange tomatoes from the total number of tomatoes. 6 + 3 = 9. 17 - 9 = 8.

7. 6

# Addition and subtraction word problems (pages 30–31)

#### Practise

1. a. 9

Read word problems carefully and identify the numbers and operations needed. 'More' means add. Add the two sets of cups. 5 + 4 = 9.

#### **b.** 5

'Left' means subtract. Subtract the stars Toby crosses out from the total. 8 - 3 = 5.

- **c.** 12
- **d. i.** 19
- ii. 18

## Extend

**2.** a. 14

Add 5 marks to Kylie's original score of 9. 9 + 5 = 14.

b. 8 c. 3

#### Apply

3. a. 5

Subtract 1 from 8 and then subtract 2 from the answer to the first calculation. 8 - 1 = 7. 7 - 2 = 5.

b. 6 c. 4

## Multiplying numbers (pages 32-33)

#### Practise

**1. a.** 4 **b.** 10 **c.** 3 5

#### Extend

- a. 2 + 2 + 2 = 6
  3 × 2 = 6 or 2 × 3 = 6
  Adding 3 lots of 2 is the same as multiplying 2 by 3.
  - **b.** 10 + 10 + 10 + 10 + 10 = 50 5 × 10 = 50 or 10 × 5 = 50
  - **c.** 5 + 5 + 5 = 15 $3 \times 5 = 15 \text{ or } 5 \times 3 = 15$



Count the dots in the arrays to check that they match the multiplication fact. Note that only the number of dots in the rows and columns need to be counted to check that they match the numbers in the fact.

# Apply

#### **4.** 14

Read word problems carefully and identify the numbers and operations needed. Calculate 2 lots of 7. 7 + 7 = 14 or  $2 \times 7 = 14$ .

## Dividing numbers (pages 34–35)

## Practise

1. a. 2



Draw lines from each cupcake to one of the plates to separate the cupcakes into two equal groups. It may be helpful to use a method such as drawing one line to the first plate and then one line to the second plate before drawing a second line to the first plate to keep the groups equal.



## Extend

#### **2.** a. 5



Count two cabbages and circle them. Repeat this until all the cabbages have been circled. There should be none left over. All the cabbages will be in equal groups of two.

**b.** 6



# Apply

## 3. 4

Use the method used in **Question 1**.

# Finding a half (pages 36–37)

## Practise

1.



A half is one of two equal parts, so one of the two equal parts should be shaded. Note that it is also possible to shade half of the shapes in other ways without the use of the dashed line given.



## Extend

#### 3. a. 4

Divide the strawberries into two equal groups. There are 4 strawberries in each group. Half of 8 is 4.

**b.** 6



## Apply

## 5. a. 7

Read word problems carefully and identify the numbers and operations needed. Half of 14 is the same as dividing by 2.  $14 \div 2 = 7$ .

#### **b.** 8

Complete the calculation. Use a bar model to help. There are 4 cherries left on the plate, so write 4 in one part of the bar. To find the whole, write 4 in the other half of the bar and add the halves together.

8		
4	4	

# Finding a quarter (pages 38–39)

## Practise

1.



A quarter is one of four equal parts, so one of the four equal parts needs to be shaded. Note that it is also possible to shade a quarter of the shape in other ways without the use of the dashed lines given.





## Extend

#### 3. a. 2

Divide the biscuits into 4 equal groups. There are 2 in each group. A quarter of 8 is 2.

- **b.** 3
- 4. a. 5

There are 5 counters in one quarter, so one quarter is equal to 5.

**b.** 20

Draw the same number of counters in each quarter to see how many counters would be in the whole. 4 lots of 5 counters is 20 counters. The whole is equal to 20 counters.



## Apply

5. a. 4

Read word problems carefully and identify the numbers and operations needed. Complete the calculation. Divide by 4 to find a quarter of a number.  $16 \div 4 = 4$ .

#### **b.** 9cm

Read the scale to find the length of the ribbon. The ribbon is 12cm. Divide the length of the ribbon by 4. 12cm  $\div$  4 = 3cm. Subtract a quarter from the total length of the ribbon. 12cm - 3cm = 9cm.

# Length (pages 40-41)

## Practise



Identify the longest screw by sight. Use a ruler to help if necessary.



Use the method used in **Question 1** to identify the shortest tree.

## Extend

#### 3. 9 blocks

Count the number of blocks below the stick. Make sure to measure from the edges of the stick.

**4. a.** 15cm

**b.** 12cm

## Apply

5. 3cm

Find the length of each ribbon. The longer ribbon is 11cm and the shorter ribbon is 8cm. Subtract the length of the shorter ribbon from the length of the longer ribbon. 11cm - 8cm = 3cm.

# Mass (pages 42-43)

## Practise



Use knowledge of the masses of everyday objects to answer this question by picking the most reasonable answer.



## Extend

#### **3. a.** 600g

Read the number on the scale that the arrow is pointing to in order to find the mass.

#### **b.** 1kg

The arrow is pointing half-way between the 0 and 2. Half of 2kg is 1kg.





The parcel weighs 80g. The scale is in grams and 80g is marked on the scale. Draw an arrow from the centre dot pointing to 80g.



# Apply

#### 5. 6 blocks

The scales balance when the mass on each side is the same. On the first scale, the teddy bear is the same mass as the toy car. On the second scale, the toy car is the same mass as 6 blocks.

# Capacity (pages 44-45)

## **Practise**



Liquid is shown by a shaded area in this picture. The empty glass will have no shading. Circle the glass with no shading.



#### Extend

3. a. 200ml

Look at the water level and read the scale.

**b.** 5 litres

Look at the water level and read the scale. Each unmarked division is equal to half a litre.



The water level is at 2 litres. The scale is in litres and 2 litres is marked on the scale. Draw a line across the jug at 2 litres on the scale. Note that the area below the line does not need to be shaded, but answers are correct if this area is shaded.

b.



## Apply

**5. a.** 30 spoons

Read word problems carefully and identify the numbers and operations needed. Find 6 lots of 5. 5 + 5 + 5 + 5 + 5 + 5 = 30 or  $5 \times 6 = 30$ .

**b.** 10 spoons

## Money (pages 46-47)

## Practise



## Extend

2. a. (£10)

The value of the note is written on the note in both digits and words. Check that the answer uses the correct units and place value.





The value of the coin is written on the coin. Note that the value of the coin is not related to its size. 5p is more than 2p.





## Apply

4. a. 7p

5p + 2p = 7p

# Money problems (pages 48-49)

## Practise

1. a.



Find the item on the price list. The pencil costs  $P_p$ . Choose the coins that add up to a total of  $p_p$ .  $5p + 2p + 2p = P_p$ .



## Extend

## **2.** a. 2p

Find the price of the marble. The marble costs 3p. Use subtraction to find the change. Subtract the cost of the marble from the coin. 5p - 3p = 2p.

**b.** 1p

# Apply

3. a. 11p

The toy cube costs 3p and the car costs 8p. 3p + 8p = 11p.

**b.** 15p

The yo-yo costs 5p. Find 3 lots of 5p. 5p + 5p + 5p = 15p.

**c.** 9p

The plane costs 17p and the car costs 8p. 17p - 8p = 9p.

# Telling the time: o'clock (pages 50–51)

## Practise

1. a. 3 (three) o'clock

The shorter hour hand is pointing at 3 and the longer minute hand is pointing at 12.

- **b.** 2 (two) o'clock
- c. 6 (six) o'clock
- **d.** 10 (ten) o'clock

## Extend



Draw the hands from the dot in the centre of the clock. The shorter hour hand is pointing at the 8. The longer minute hand is pointing at the 12.



Use the method used in **Question 2a**. Remember that midday is another way of saying 12 o'clock.

# Apply

## 3. a. 1

Read the first clock. Matt starts playing tennis at 3 o'clock. Read the second clock. Matt finishes playing tennis at 4 o'clock. Find the length of time between the times shown on the two clocks. It takes 1 hour for the time to move from 3 o'clock to 4 o'clock. Matt played tennis for 1 hour.

b. 4

## Telling the time: half past (pages 52–53)

## Practise

1. a. half past 10 (ten)

The longer minute hand is pointing at 6, so the time is half past an hour. The shorter hour hand is pointing between the 10 and 11, so the hour must be 10. The time is half past 10.

- **b.** half past 12 (twelve)
- c. half past 2 (two)
- d. half past 9 (nine)

## Extend

2.



Draw the hands from the dot in the centre of the clock. The shorter hour hand is pointing between the 7 and the 8 because it is halfway through the hour. The longer minute hand is pointing at the 6.



## Apply

3. a. 1

Read the first clock. Amy starts playing football at half past 3. Read the second clock. Amy finishes playing football at half past 4. Find the length of time between the times shown on the two clocks. It takes 1 hour for the time to move from half past 3 to half past 4. Amy played football for 1 hour.



## Time language (pages 54-55)

## Practise

- 1. a. The cheetah is the fastest animal.
  - **b.** The elephant is slower than the cheetah.
  - **c.** The lion is faster than the elephant.
- **2.** Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday

#### Extend

- 3. a. third
  - **b.** second
  - c. first
  - d. last

#### Apply



# 2D shapes (pages 56-57)

## Practise

1. a. circle

Think about the properties of each shape. This shape has one curved side, so it must be a circle.

- **b.** rectangle
- c. triangle
- d. pentagon
- e. octagon
- f. hexagon

## Extend

**2.** a. 4 4

Count the number of vertices the shape has. Then count the number of sides the shape has. Note that there are the same number of sides and vertices.

- **b.** 4 4
- **c.** 5 5

## **d.** 6 6

- **e.** 8 8
- 3. same

# Apply

- **4. a. circl**e
  - **b.** square
  - c. rectangle

## **5.** 2

The lolly sticks are being used as the sides of the pentagon. A pentagon has 5 sides. 3 lolly sticks have already been used. Subtract the number of lolly sticks used from the number of sides a pentagon has to find out how many more are needed. 5 - 3 = 2.

# 3D shapes (pages 58–59)

# Practise

- 1. a. cube
  - **b.** cone
  - c. cylinder
  - d. sphere

# Extend



Think about the properties of each shape. These are all cylinders because they have two circular faces connected by one curved face.



## Apply

- 3. a. <sup>L</sup>
  - **b.** 5
  - **c.** 3

# Turns (pages 60–61)

# Practise

1. a. left

Think about which way Hugo must turn. The football is on his left, so he must turn left to play football.

**b.** (right)



Imagine turning the pen one-quarter of a turn clockwise. It may help to pick part of the pen and think about where that part would end up. Turn it in quarters until three-quarters have been completed and pick the matching picture.

# Extend

## 3. a. a half turn 🗸

Use the method used in **Question 2**, but stop turning when the rotation matches the image.

- **b.** a three-quarter turn clockwise  $\checkmark$
- **c.** a quarter turn clockwise  $\checkmark$

# Apply

4. a. 1

Use the method used in **Question 2**, but stop turning when the arrow reaches the correct number.

- **b.** 2 **c.** 3
- d. 1

Use the method used in **Question 4a**, but use half turns rather than quarter turns.

# Patterns (pages 62–63)

# Practise





#### Extend

3. α.



The pattern is one pentagon, two stars. The last shape before the missing shape is a pentagon, so the missing shape must be a star.

b. ()

## Apply

4.



All the dominoes in the pattern have 6 dots on the left-hand side of the domino. On the righthand side of the domino, the number of dots is increasing by one each time. The last domino had 3 dots, so the next domino must have 4 dots. Draw 6 dots on the left-hand side of the domino and 4 dots on the right-hand side of the domino.





The third shape is a square and the first shape is a heart. This leaves the second and the fourth shape in the pattern as rectangles.

# Position (pages 64–65)

## **Practise**

- **1. a.** The cat is next to the dog.  $\checkmark$ 
  - **b.** The cat is behind the cake.  $\checkmark$
  - **c.** The cat is on top of the chair.  $\checkmark$

Look at where the cat is in relation to the chair and tick the sentence that best describes the cat's position. As the sentence is describing the cat's position, do not pick a preposition that describes the chair's position in relation to the cat.

## Extend

2.



Count the minibeasts from the left. 'Second' means two, so count two minibeasts from the left. The second minibeast that Alice found was a ladybird.



Count the minibeasts from the left. 'Fourth' means four, so 'in the fourth position' means count four minibeasts from the left. The minibeast in the fourth position is the woodlouse.

## Apply

3. a. cube

Identify the sphere in the grid. This is the football. If the sphere is below the shape the question is asking about, then the shape is above the sphere. The object above the football is the package. The package is a cube shape.

**b.** cone **c.** cylinder

# Final practice (pages 66-68)

1. a. 7

Identify the whole. The whole is equal to 10. The whole is equal to the total of the parts. Identify the known part. The known part is 3. Subtract the known part from the whole to find the missing part. 10 - 3 = 7. Award 1 mark for the correct answer.

**b.** 15

Identify the whole. The whole is equal to the total of the parts. Identify the known parts. The known parts are 8 and 7. Add the parts to find the whole. 8 + 7 = 15. Award 1 mark for the correct answer.

**2.** a. 13

When completing an addition calculation on the number line, count forwards. Award 1 mark for the correct answer.

#### **b.** 5

When completing a subtraction calculation on the number line, count backwards. Award 1 mark for the correct answer.

**c.** 17

Use the method used in **Question 2a**. Award 1 mark for the correct answer.

#### **d.** 6

Use the method used in **Question 2b**. Award 1 mark for the correct answer.

**3.** 3



Draw lines from each sandwich to one of the plates to separate the sandwiches into two equal groups. It may be helpful to use a method such as drawing one line to the first plate and then one line to the second plate before drawing a second line to the first plate to keep the groups equal. Award 1 mark for the correct answer.

#### 4. a. <mark>8</mark>

Read word problems carefully and identify the numbers and operations needed. 'More' means add. 7 + 1 = 8. Award 1 mark for the correct answer.

#### **b.** 15

'Altogether' means add. 7 + 8 = 15. Award 1 mark for the correct answer.

#### 5. 7

Half is one of two equal parts. To find half, divide by 2.  $14 \div 2 = 7$ . Award 1 mark for the correct answer.

#### 6. a. 3

Look at the bar. The bar represents one whole. The bar is split into four equal parts. Each part represents one quarter. There are three counters in one part of the bar. One quarter must equal 3. Award 1 mark for the correct answer.

#### **b.** 12

Draw the same number of counters in each quarter to find the number of counters in the whole.



Award 1 mark for the correct answer.

#### **7.** 6

Find 3 lots of 2 scoops. 2 + 2 + 2 = 6 or 2 × 3 = 6. Award 1 mark for a correct method that would lead to the correct answer. Award 2 marks for the correct answer. Maximum 2 marks.

#### **8.** a. 19p

Complete an addition calculation to find the total cost. 11p + 8p = 19p. Award 1 mark for a correct method that would lead to the correct answer. Award 2 marks for the correct answer. Maximum 2 marks.

#### **b.** 4p

Complete a subtraction calculation to find the change. Subtract the cost of the rocket sticker from 20p. 20p - 16p = 4p. Award 1 mark for a correct method that would lead to the correct answer. Award 2 marks for the correct answer. Maximum 2 marks.

#### **q.** 4cm

Read the scale to find the length of each pencil. Find the difference between the lengths of the pencils. 12cm - 8cm = 4cm. Award 1 mark for the correct answer.





Think about the properties of a cube. A cube has square faces. Circle the shapes that do not have square faces. It may help to think about what the objects pictured look like in real life. Award 1 mark for both correct answers circled.