

Practise Maths

Sarah-Anne Fernandes and Trevor Dixon

Year **1**

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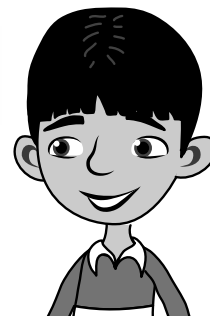
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Contents

Coverage of the Programme of Study.....	4–5
How to use this book	6–7
Counting to 100	8–9
Numbers to 100 in numerals	10–11
Numbers to 20 in words	12–13
Counting in multiples of 2.....	14–15
Counting in multiples of 5.....	16–17
Counting in multiples of 10.....	18–19
Finding one more	20–21
Finding one less	22–23
Comparing numbers.....	24–25
Number bonds within 20.....	26–27
Addition.....	28–29
Subtraction	30–31
Multiplication.....	32–33
Division	34–35
Half	36–37
Quarter	38–39
Comparing and measuring length	40–41
Comparing and measuring mass.....	42–43
Comparing and measuring capacity	44–45
Money.....	46–47
Reading clocks	48–49
Time language.....	50–51
2-D shapes	52–53
3-D shapes	54–55
Position.....	56–57

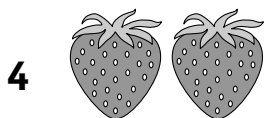
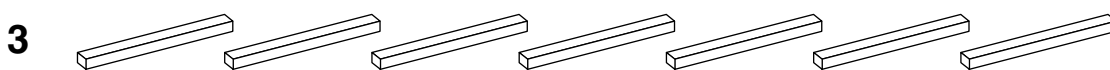
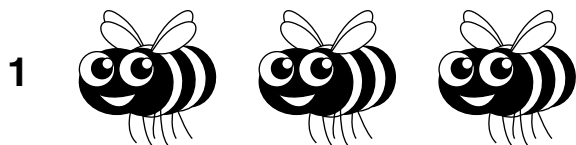
Counting to 100



Ruby

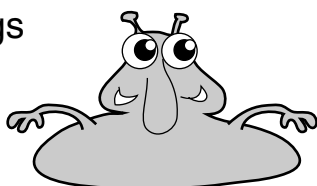


Count the items in each set.

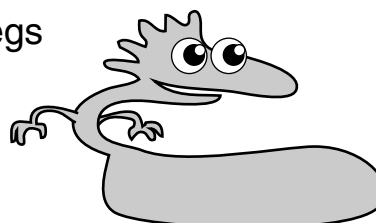


Copy each alien and draw the number of legs.

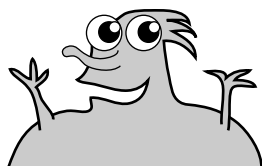
6 8 legs



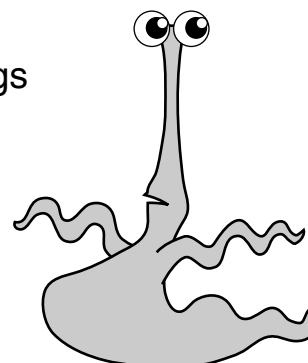
9 9 legs



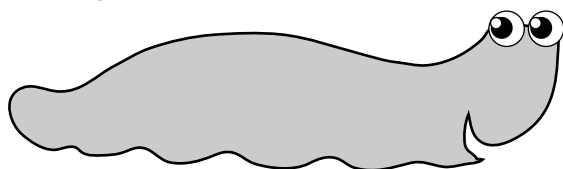
7 14 legs



10 12 legs



8 18 legs



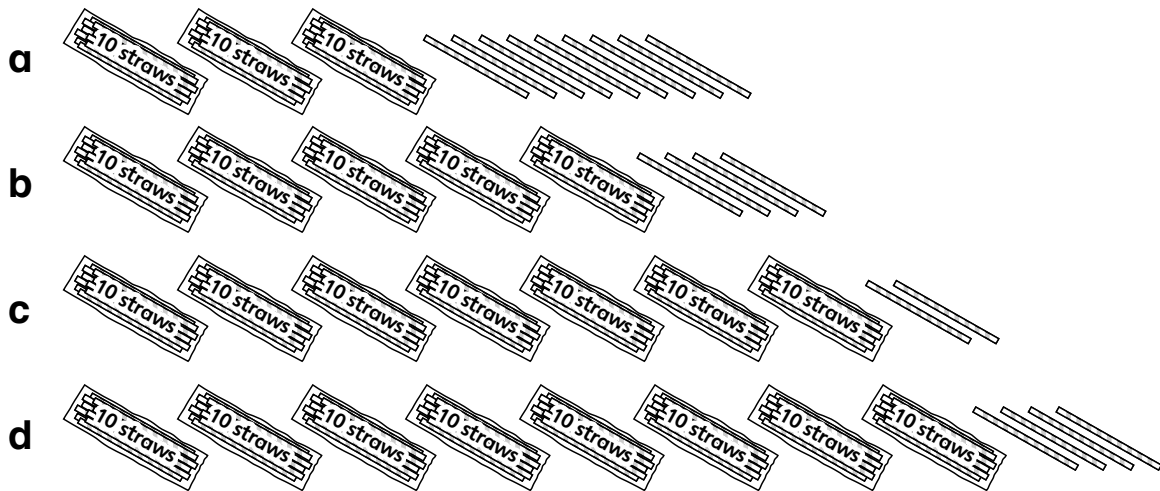
Pearl



- 1 Look at the picture.
 - a Count the squirrels.
 - b Count the leaves.
 - c Count the bees.
 - d Count the owls.
 - e Count the birds.



- 2 Count the straws in each set.



Diamond



- 1 Ben is counting forward in ones from 27 to 100.

Will he say the number 63?

Explain how you know.

- 2 Sita is counting backwards in ones from 72 to 0.

Will she say the number 85?

Explain how you know.

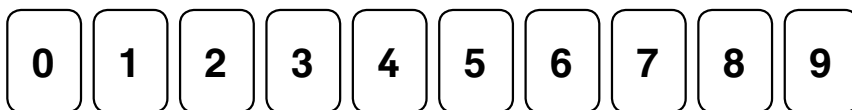
- 3 Amy is counting forward in ones from 0 to 50.

Will she say the numbers 68 and 75?

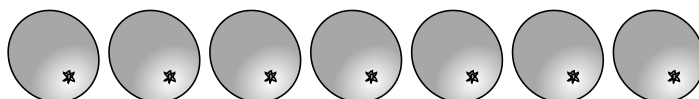
Explain how you know.

Numbers to 100 in numerals

You can use this set of digits to write any number to 100.



Write the number of oranges in this set.



The last number you say is the total number of items in the set.
Write this number as your answer. The number of oranges is 7.

Ruby



1 Count the items in each set.

Choose the correct number.



3

5

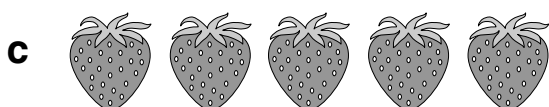
4



7

1

3

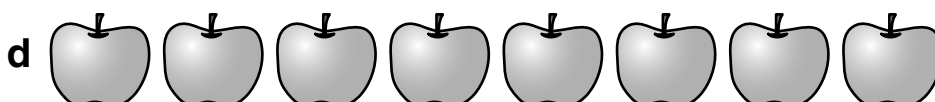
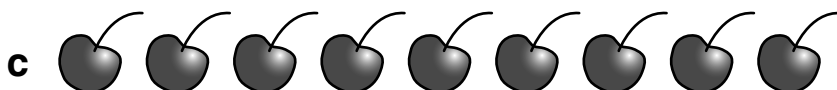
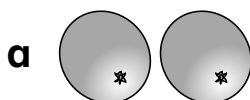


5

6

3

2 Write the number of items in each set.



Pearl



Look at this 100 square. Write down all the missing numbers.

Look for patterns in the numbers.

1	2	3	4	5		7	8	9	10
11	12	13		15	16	17	18	19	20
21	22	23	24		26	27	28	29	30
31		33	34	35	36	37	38	39	40
41	42	43	44	45		47	48	49	50
	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66		68	69	70
71	72	73	74	75	76	77	78	79	
81	82	83	84	85	86	87	88		90
91	92		94	95	96	97	98	99	100

Diamond



- 1 Amy is making a birthday card for her brother Sam, who will be eight years old. She has written on the card how old he will be.

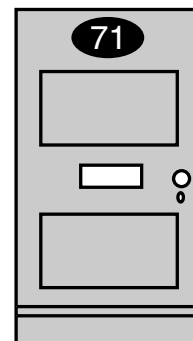
Is she correct? Explain your reasoning.



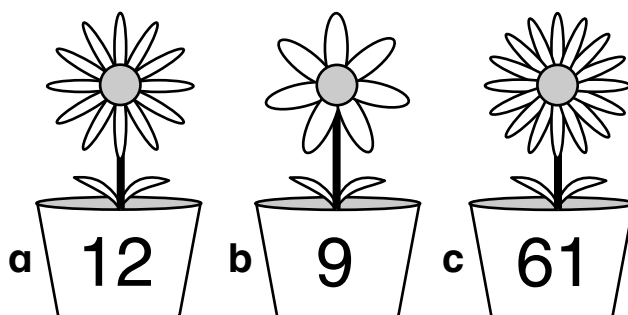
- 3 Here is Ben's front door.

He says he lives at number seventeen.

Do you agree? Explain your reasoning.



- 2 Meg counts the petals on each flower and writes the number on each pot. Which pots are correct? Which pots are wrong?



Numbers to 20 in words

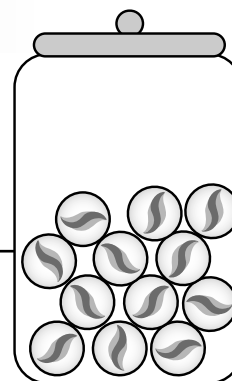
The last number you count is the total number of items in the set.

Write this number as your answer in words.

Take care with the numbers 12, 13, 14, 15, 16, 17, 18 and 19.

Write a label for the number of marbles in this jar in words.

There are **twelve** marbles in the jar.

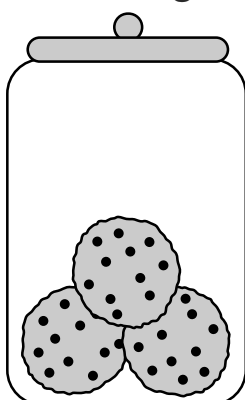


Ruby



Count the things in each jar. Then choose the correct label for the jar.

1

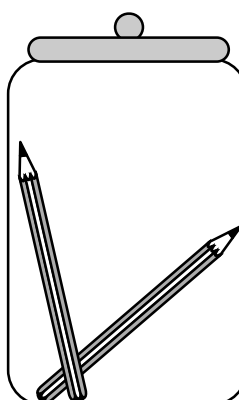


two

five

three

4

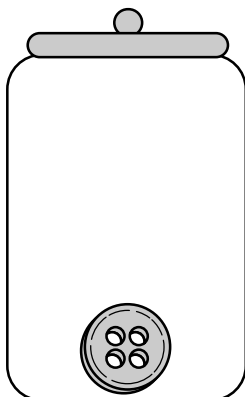


two

four

six

2

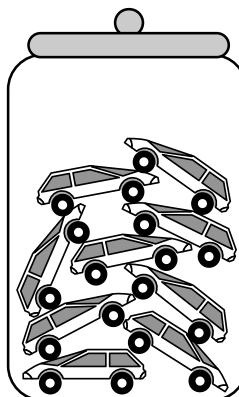


one

ten

two

5

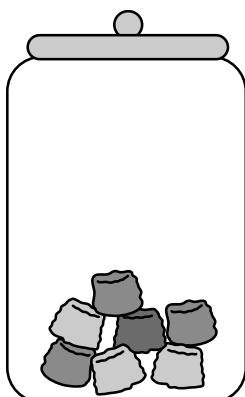


four

eight

nine

3

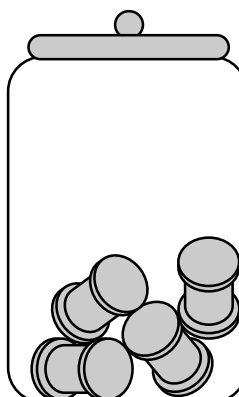


six

two

seven

6



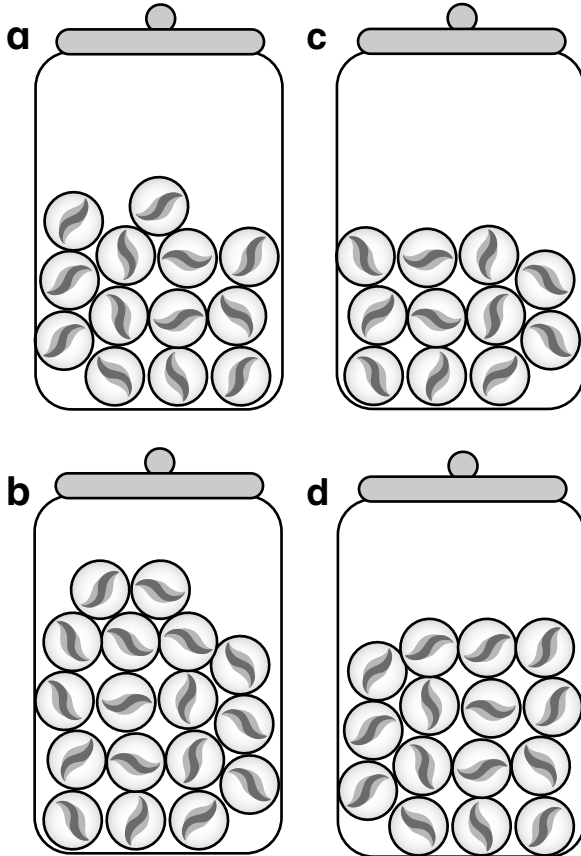
four

two

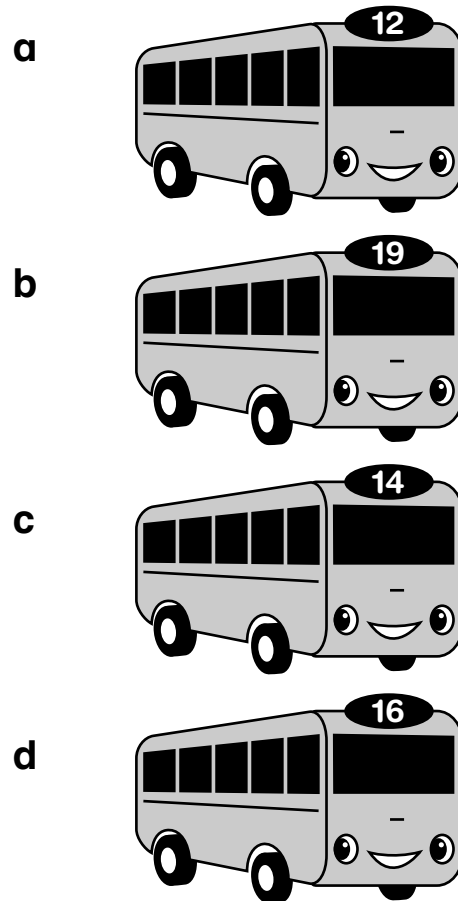
eight

Pearl

- 1** Count the marbles in each jar and write the number in words.



- 2** Write the number of each bus in words.



Diamond

- 1** Tim says the number 2 and the number 20 are the same when they are written in words.

Do you agree? Explain your reasoning.

- 2** Omar labels the number of pencils in each pot.

Is he correct? Explain your reasoning.



- 3** Fran is writing the numbers up to 20 in words. She says that seventeen has the most letters.

What do you think? Explain your reasoning.

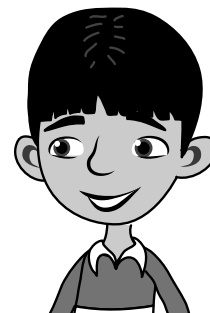
Counting in multiples of 2

A **multiple** is lots of the same number or quantity.

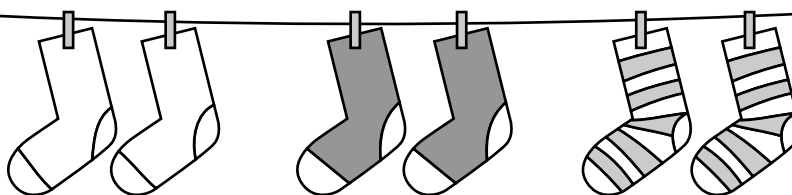
The multiples of 2 are called **even numbers**.

0 1 **2** 3 **4** 5 **6** 7 **8** 9 **10** 11 **12** 13 **14** 15 **16** 17 **18** 19 **20**

Numbers that are not multiples of 2 are called **odd numbers**.



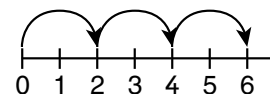
Count in twos to find how many socks are on the washing line.



Look at the washing line and start counting from 2.

3 pairs means 3 steps of 2 so 2, 4, 6.

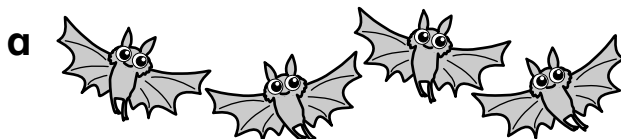
Check to see if your answer is an even number.



Ruby



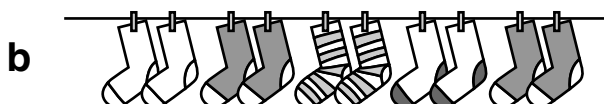
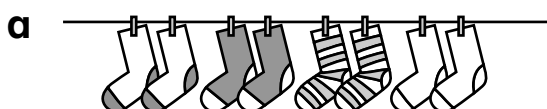
1 Count in twos to find how many wings there are in total.



2 Count in twos to find how many wellington boots are stuck in the mud.



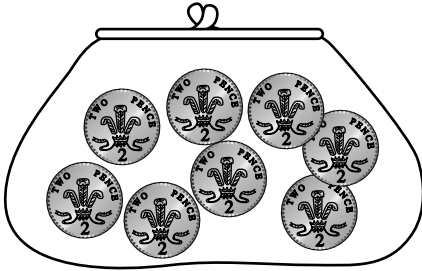
3 Count in twos to find how many socks there are on the washing line.



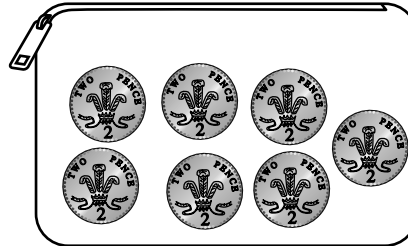
Pearl

1 Count in twos to find the total amount of money in each purse.

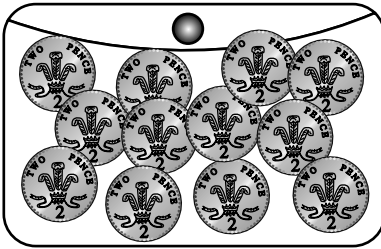
a



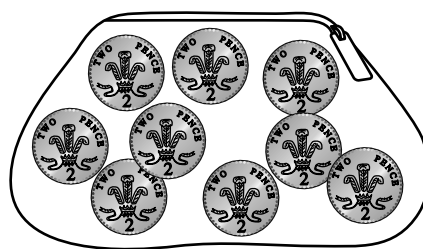
c



b



d



2 Complete these number patterns.

a 2, 4, 6, ,

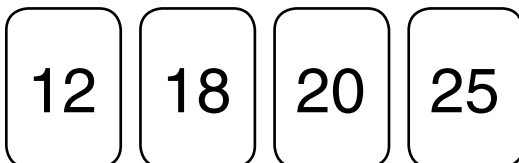
c 18, 20, 22, ,

b 6, 8, ,

d 26, 28, 30, ,

Diamond

1 Look at this set of numbers.



Which is the odd one out? Explain your reasoning.

2 Will you say the number 27 if you count in multiples of 2 from 0?

Explain your reasoning.

3 What are the missing numbers in this pattern?

, 26, , 30, , 34, 36

4 Fran says 14, 16 and 18 are even numbers.

Explain why she is correct.

Counting in multiples of 5

A **multiple** is lots of the same number or quantity.

The multiples of 5 always end in 5 or 0.

0 1 2 3 4 **5** 6 7 8 9 **10** 11 12 13 14 **15** 16 17 18 19 **20**

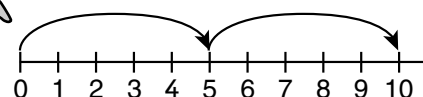
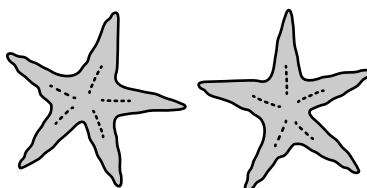


Count in fives to find how many starfish arms there are altogether.

Each starfish has 5 arms.

2 starfish = 2 steps of 5 = 5, 10.

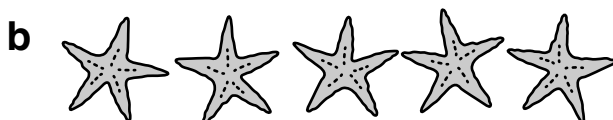
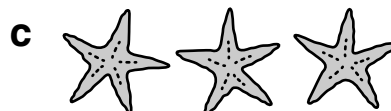
Check to see if your answer is a multiple of 5.



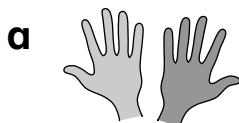
Ruby



1 Count in fives to find how many starfish arms there are altogether.



2 Count in fives to find how many fingers there are in total.

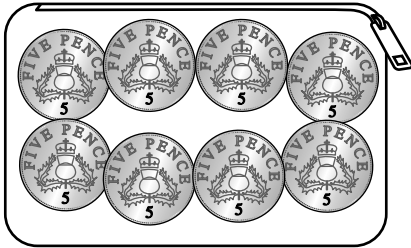


Pearl

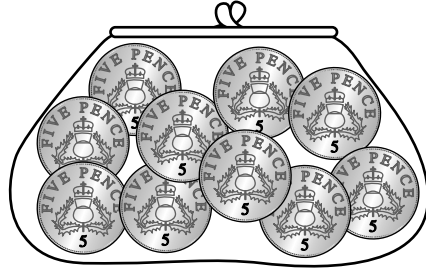


1 Count in fives to find the total amount of money in each purse.

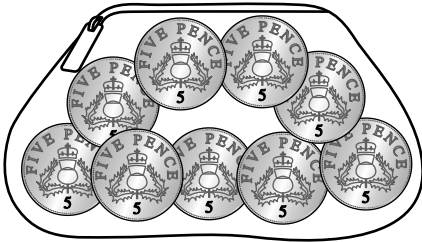
a



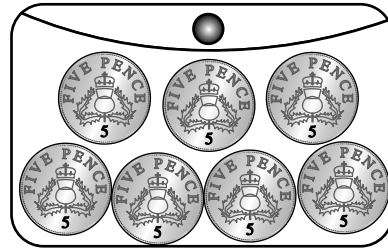
c



b



d



2 Complete these number patterns.

a 5, 10, 15, ,

c 35, 40, 45, ,

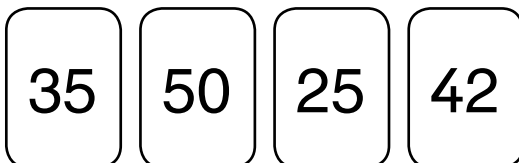
b 20, 25, 30, ,

d 30, 35, ,

Diamond



1 Look at this set of numbers.



Which is the odd one out?

2 Will you say the number 65 if you count in multiples of 5 from 0?

Explain your reasoning.

3 What are the missing numbers in this pattern?

, 25, , 35, , 45, 50

4 Fran says all multiples of 5 are even numbers.

Do you agree? Explain your reasoning.

Counting in multiples of 10

A **multiple** is lots of the same number or quantity.

The multiples of 10 always end in 0.

0 1 2 3 4 5 6 7 8 9 **10** 11 12 13 14 15 16 17 18 19 **20**

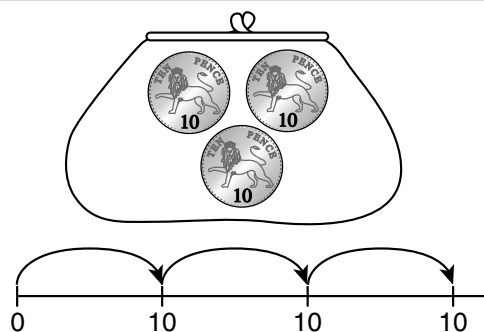
21 22 23 24 25 26 27 28 29 **30** 31 32 33 34 35 36 37 38 39 **40**

41 42 43 44 45 46 47 48 49 **50**

Count in multiples of ten to find the total amount of money in this purse.

Three 10p coins means
3 steps of 10: 10, 20, 30.

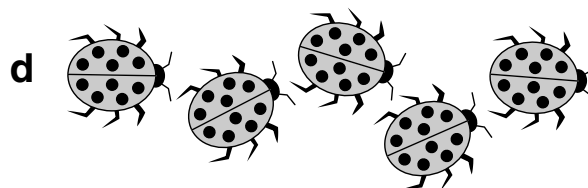
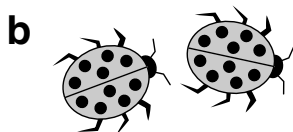
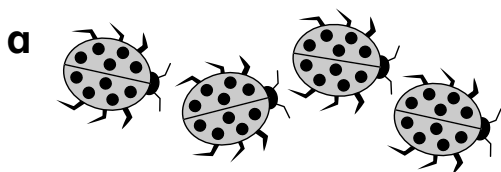
Check to see if your answer
is a multiple of 10.



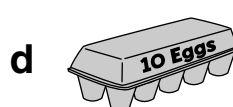
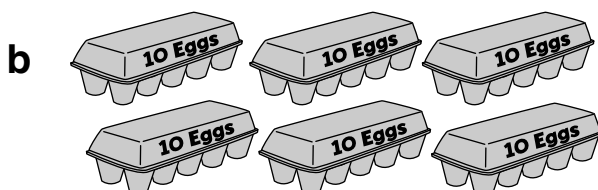
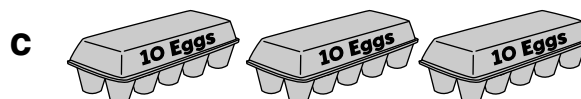
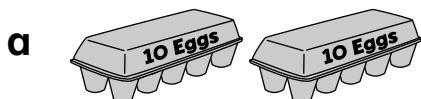
Ruby



- 1 Count in multiples of 10 to find how many spots there are altogether on the ladybirds.



- 2 Count in multiples of 10 to find how many eggs there are in total.

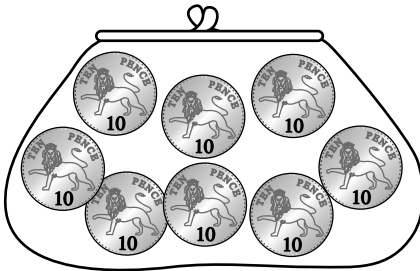


Pearl

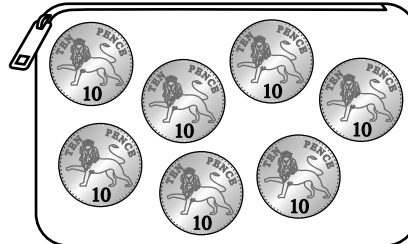


1 Count in tens to find the total amount of money in each purse.

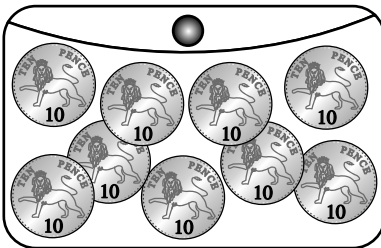
a



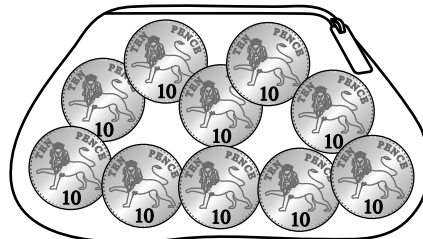
c



b



d



2 Complete these number patterns.

a 10, 20, 30, ,

c 20, 30, 40, ,

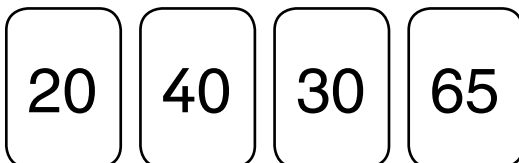
b 50, 60, 70, ,

d 60, 70, 80, ,

Diamond



1 Look at this set of numbers.



Which is the odd one out?

2 Will you say the number 85 if you count in multiples of 10 from 0?

Explain your reasoning.

3 What are the missing numbers in this pattern?

40, , 60, 70, 80, , 100

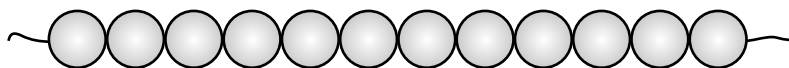
4 Fran says all multiples of 10 are even numbers.

Do you agree? Explain your reasoning.

Finding one more

You find one more than a number by adding on 1.

Check to see that your answer is bigger than the number you started with.

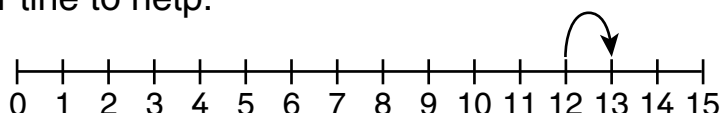


There are 12 beads on the string.

Now add 1 more.

How many beads are there now?

Use the number line to help:

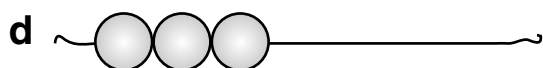
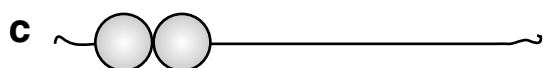
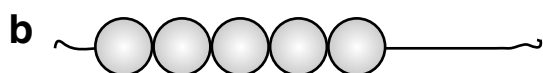
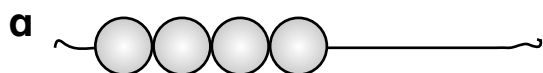


1 more than 12 is 13.

Ruby

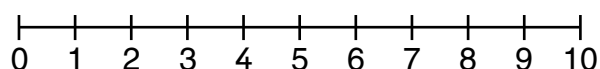


- 1** Add one more bead to the string.
How many beads are there now?



- 2** Write the missing numbers.

Use the number line to help you.



a 1 more than 6 is .

b 1 more than 9 is .

c 1 more than 3 is .

d 1 more than 8 is .

e 1 more than 1 is .

Pearl



Use the 100 square to help you find the missing numbers.

Look for number patterns in the columns and rows.

- 1 1 more than 14 is
- 2 1 more than 26 is
- 3 1 more than 30 is
- 4 1 more than 44 is
- 5 1 more than 49 is
- 6 is 1 more than 25
- 7 is 1 more than 32
- 8 is 1 more than 57
- 9 is 1 more than 66
- 10 is 1 more than 90

1	2	3	4	5	6	7	8	9	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	99	100

Diamond



- 1 Sarah thought of a number. One more than her number was 24.
What was her number?
- 2 Raj says 50 is one more than 49 and 49 is one more than 48.
Do you agree? Explain your reasoning.
- 3 Find how many different ways you can complete this number sentence using numbers greater than 20 but less than 30.

is 1 more than

- 4 Here are some digit cards.

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

Use the cards to make two-digit numbers to complete each number sentence.

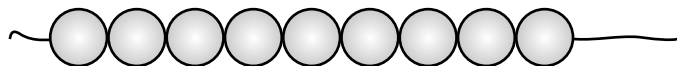
a is 1 more than

b is 1 more than

Finding one less

You find one less than a number by subtracting 1.

Check to see that your answer is smaller than the number you started with.



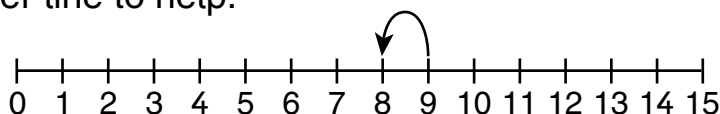
Take one bead off the string. How many beads are there now?

Count the beads on the string.

There are 9 beads on the string.

Now find 1 less by taking 1 bead off the string.

Use the number line to help:

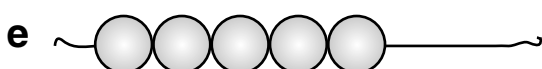
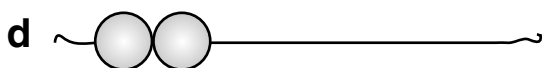
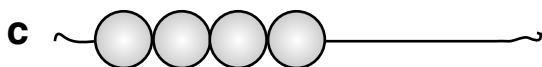
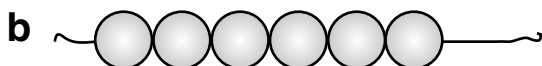
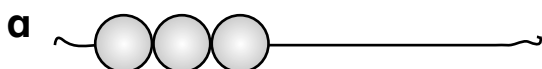


1 less than 9 is 8.

Ruby

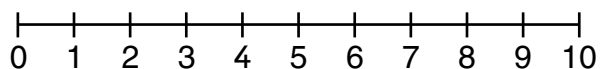


- 1** Take one bead off the string.
How many beads are there now?



- 2** Find the missing numbers.

Use the number line to help you.



a 1 less than 7 is .

b 1 less than 3 is .

c 1 less than 9 is .

d 1 less than 8 is .

e 1 less than 10 is .

Pearl



Use the 100 square to help you find the missing numbers.

Look for patterns in the columns and rows.

- 1 1 less than 15 is
- 2 1 less than 24 is
- 3 1 less than 33 is
- 4 1 less than 48 is
- 5 1 less than 50 is
- 6 is 1 less than 21
- 7 is 1 less than 36
- 8 is 1 less than 52
- 9 is 1 less than 68
- 10 is 1 less than 94

1	2	3	4	5	6	7	8	9	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	99	100

Diamond



- 1 Bev thought of a number. One less than her number was 89.
What was her number?
- 2 Raj says 45 is one less than 46 and 46 is one less than 47.
Do you agree? Explain your reasoning.
- 3 Find how many different ways you can complete this number sentence using numbers greater than 20 but less than 30.

is 1 less than

- 4 Here are some digit cards.

1

2

3

4

Use the cards to complete each number sentence.

a

is 1 less than

44

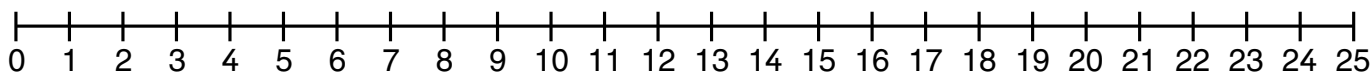
b

20

is 1 less than

Comparing numbers

When you compare two numbers, you decide which is smaller or which is larger. You can use a number line to compare numbers.



Compare 13 and 21. Which number is smaller?

13 is smaller than 21 as it has only 1 ten. 21 has 2 tens.

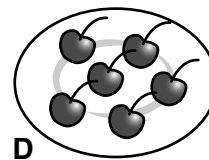
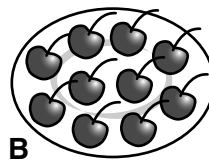
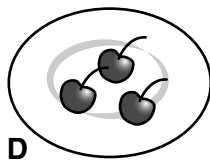
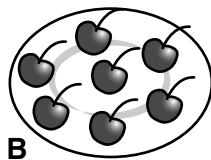
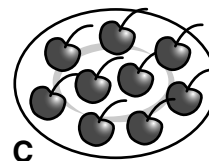
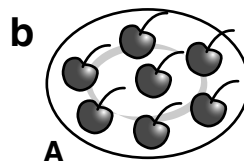
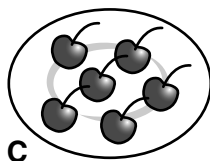
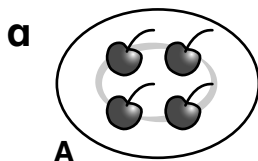
Check on the number line. 13 comes before 21 on the number line, so it is smaller.

Ruby



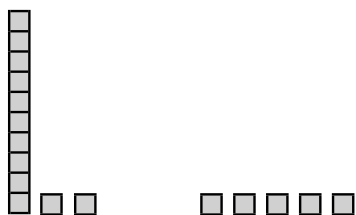
1 Count the cherries on each plate.

Which plate has the fewest cherries?

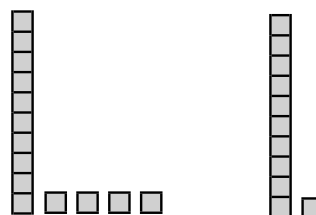


2 Compare these numbers. Write 'more than' or 'less than'.

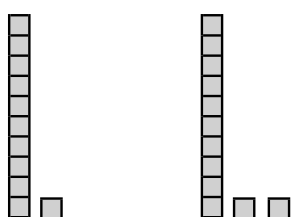
a 12 is _____ than 5



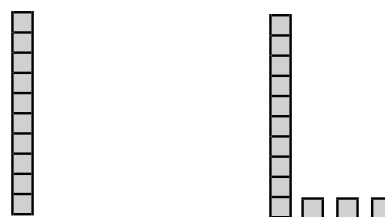
c 14 is _____ than 11



b 11 is _____ than 12



d 10 is _____ than 13

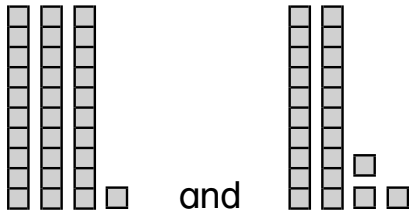


Pearl

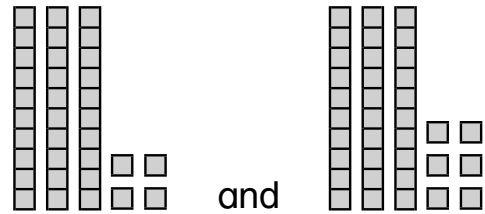


1 Compare these numbers. Write the smaller number.

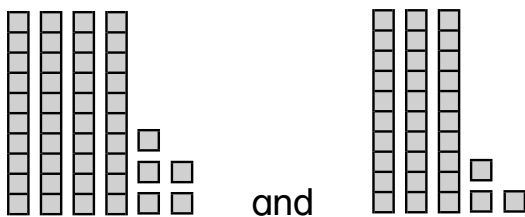
a 31 and 23



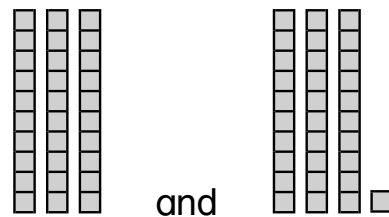
c 34 and 36



b 45 and 33



d 30 and 31



2 Use a 100 square to compare the numbers in each pair.

Write the larger number.

a 65 and 78

c 64 and 84

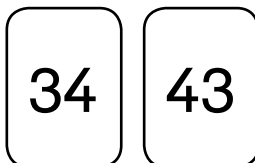
b 98 and 85

d 93 and 91

Diamond



1 Look at these two numbers.



What is the same? What is different?

2 Use the digits 5 and 4 to make two different numbers.

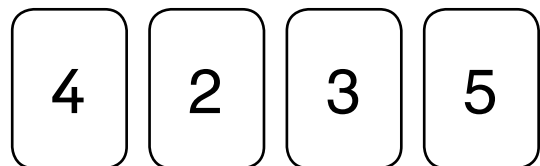
Which is the larger number?

Which is the smaller number?

3 Amy says 76 is larger than 56.

Do you agree? Explain your reasoning.

4 Look at these digits.



Use them to make a number larger than 30 but less than 50.

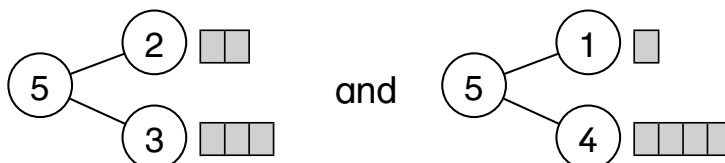
Find as many different numbers as you can.

Number bonds within 20

Number bonds are made up of two numbers that can be put together to make another number. The two parts together make up the whole.

Write the numbers that can be put together to make 5.

There are two different ways to make a number bond to 5.

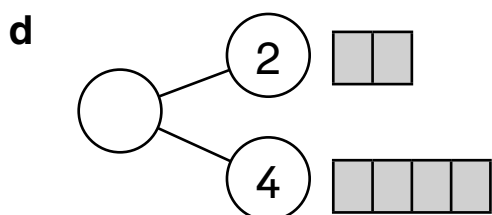
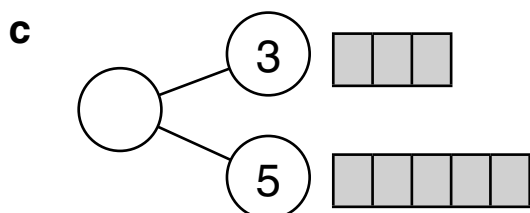
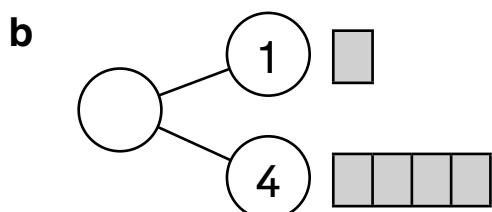
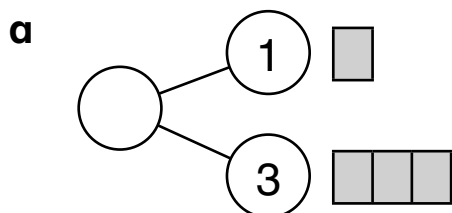


To check, use cubes to make the whole and then break it into parts.

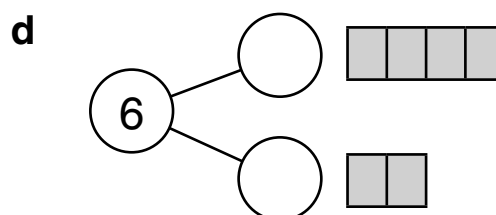
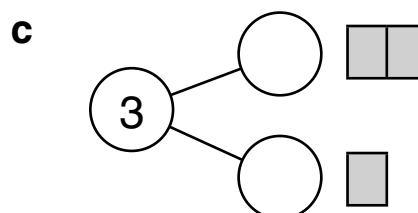
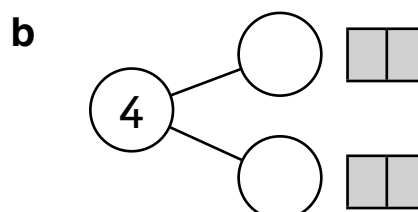
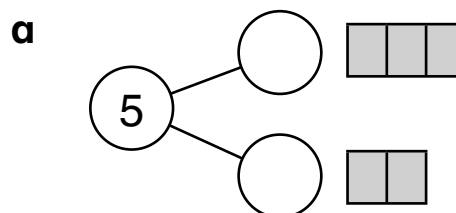
Ruby



1 Write the whole.



2 Write the parts that make the whole.

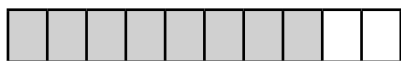


Pearl

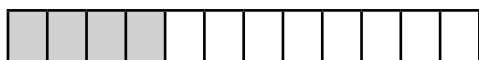


1 Use the bar to help you write the number bond sentences.

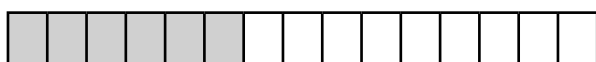
a and make 10



b and make 12



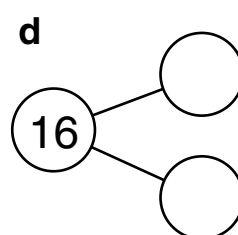
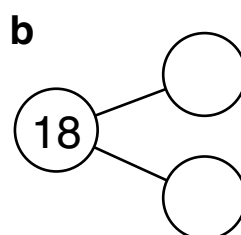
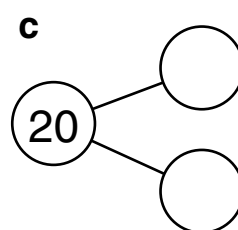
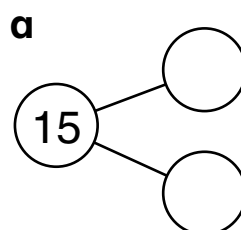
c and make 15



d and make 11



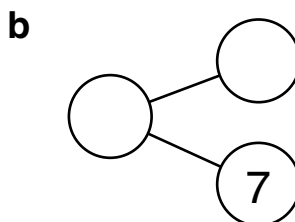
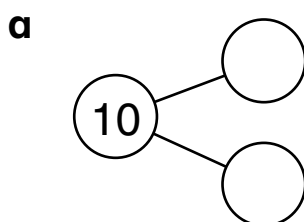
2 Complete the parts to make the whole.



Diamond

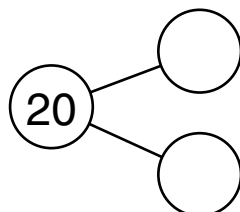


1 Find some numbers to make the parts equal the whole.



2 Jen says there are ten different ways to make 20.

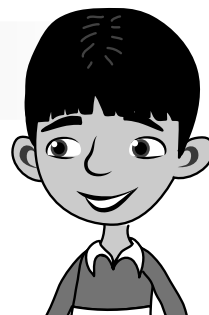
Do you agree? Explain your reasoning.



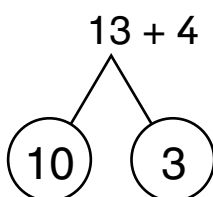
Addition

When you **add** two whole numbers you find their **total**.

To add a two-digit number to a single-digit number, partition the bigger number into tens and ones. Then add the ones.

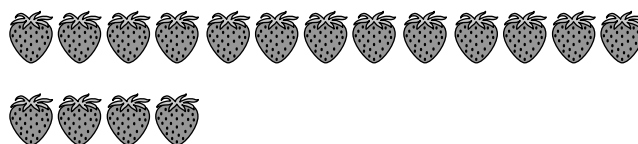


$$13 + 4 = \square$$



$$10 + 3 + 4 = 17$$

Check your answer is larger than the two numbers you started with.



Ruby



1 Find the total.

a $2 + 1 = \square$



b $3 + 2 = \square$



c $1 + 3 = \square$

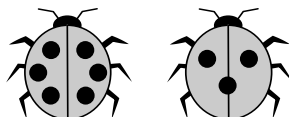


d $4 + 2 = \square$

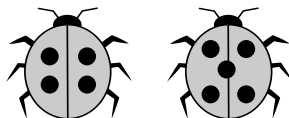


2 Complete the addition sentences to find the total number of spots on each ladybird.

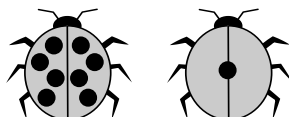
a $\square + \square = \square$



b $\square + \square = \square$



c $\square + \square = \square$



Pearl

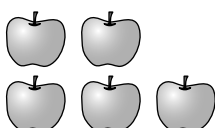
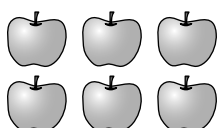


1 Find the total.

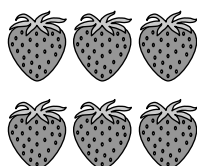
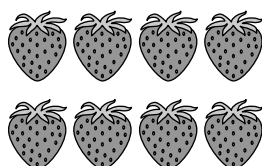
a $7 + 4 = \square$



b $6 + 5 = \square$



c $8 + 6 = \square$



2 Partition the numbers into tens and ones. Then add the numbers.

a $12 + 4$

b $14 + 5$

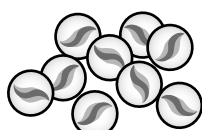
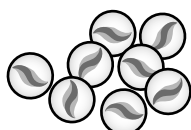
c $11 + 7$

Diamond



1 Fred has 8 marbles. Raj gives him 9 more marbles.

How many marbles does Fred have now?



2 Mia has 7 beads, Tom has 10 beads and Tia has 2 beads.

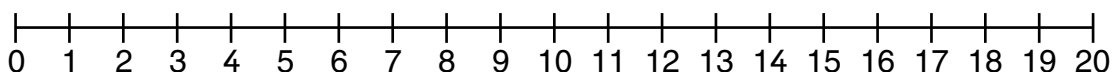
They put all their beads on to one string.

How many beads will be on the string?



3 Ella has 8 stickers. She buys 4 more stickers every day.

How many days will it take her to collect 20 stickers?



Subtraction

When you **subtract**, you take one number away from another.

When you subtract a single-digit number from a two-digit number, you can partition the bigger number and then subtract the ones.

$15 - 4 = \square$
 $15 - 4$

 $5 - 4 = 1$
 so $15 - 4 = 11$



Ruby

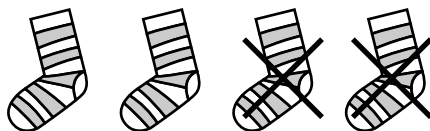


1 Find the difference.

a $5 - 1 = \square$



b $4 - 2 = \square$



c $5 - 3 = \square$



2 Complete the subtraction sentences to find how many cookies are left.

a $6 - 4 = \square$



b $9 - 5 = \square$



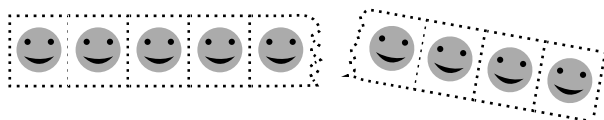
c $8 - 6 = \square$



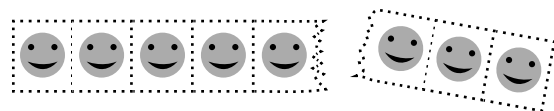
Pearl

- 1 Some stickers are torn off each strip. Complete the subtraction number sentences and find how many stickers are left.

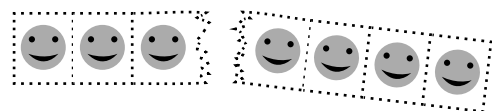
a $9 - \square = \square$



b $8 - \square = \square$



c $\square - \square = \square$





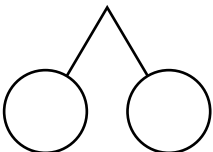
- 2 Partition the numbers into tens and ones.

Then subtract the numbers.

a   $15 - 3$



b   $17 - 4$



c   $14 - 2$



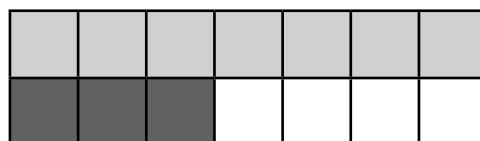
Diamond

- 1 Omar has 13 football stickers. He gives 5 to Ben.
How many stickers does he have left?



- 2 Jan says if $5 + 4 = 9$ then $9 - 4 = 5$.
Do you agree? Explain your reasoning.

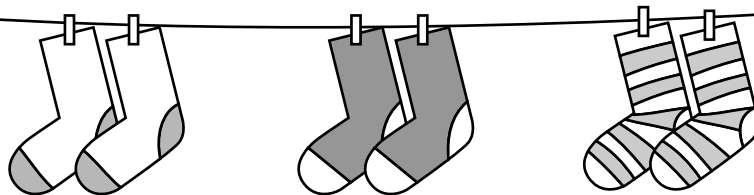
- 3 Write two different subtraction sentences to match this diagram.



Multiplication

Multiplication is the same as adding the same number to itself lots of times. The multiplication symbol is \times .

How many socks are on the washing line in total?



There are two socks in each pair.

3 pairs of socks = $2 + 2 + 2 = 6$ socks.

Multiplying, this is the same as $2 \times 3 = 6$ socks.

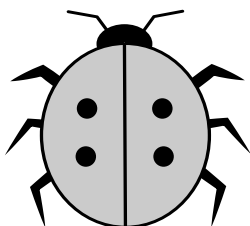


Ruby



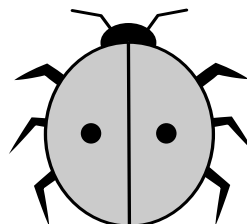
Write a number sentence for each ladybird to double the number of spots.

1



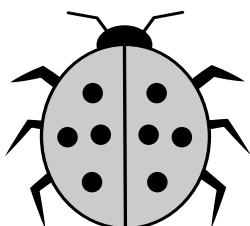
$$\square + \square = \square$$

4



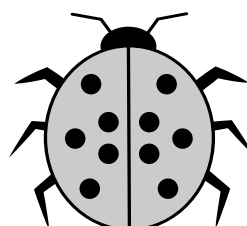
$$\square + \square = \square$$

2



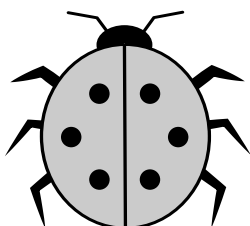
$$\square + \square = \square$$

5



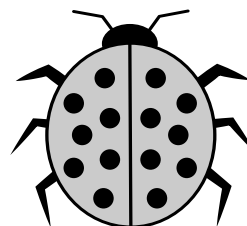
$$\square + \square = \square$$

3



$$\square + \square = \square$$

6



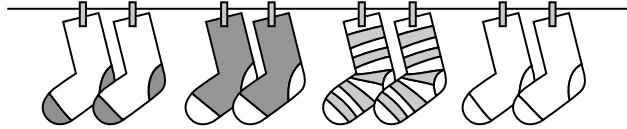
$$\square + \square = \square$$

Pearl



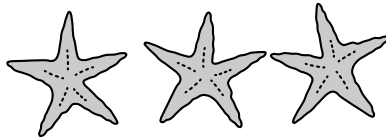
1 Write two different number sentences to match each picture.

a How many socks are there in total?



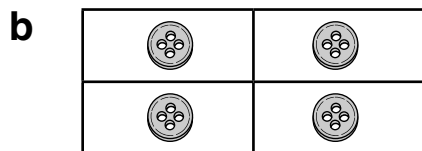
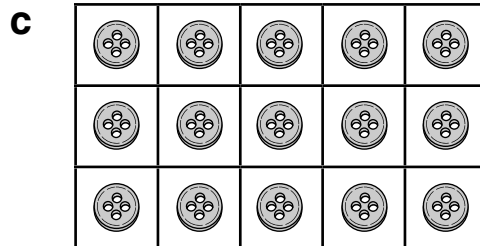
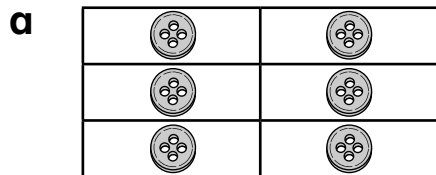
$$\square + \square + \square + \square = \square \quad \text{and} \quad \square \times \square = \square$$

b How many starfish arms are there in total?



$$\square + \square + \square = \square \quad \text{and} \quad \square \times \square = \square$$

2 Use the array to calculate the number of buttons.



Diamond

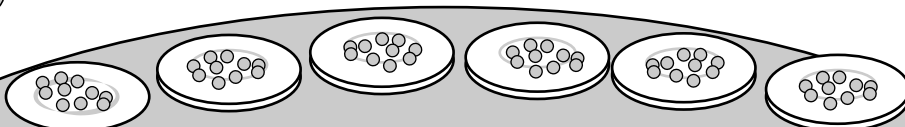


1 Ali buys 4 packs of snack bars. Each pack has 2 bars in it. How many bars does Ali get in 4 packs?

2 At Ben's party there are 5 balloons on every table. There are 6 tables. Ben says there will be 30 balloons altogether.

Do you agree? Draw a picture to explain your answer.

3 Raj has 10 peas on his plate. Each of the other plates has the same number of peas. How many peas are there altogether?

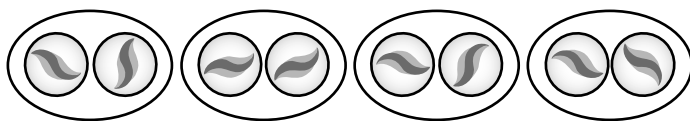


Division

Division is sharing things equally or grouping them into sets of the same size.

The symbol for division is \div .

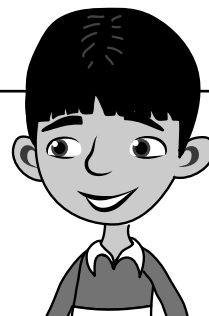
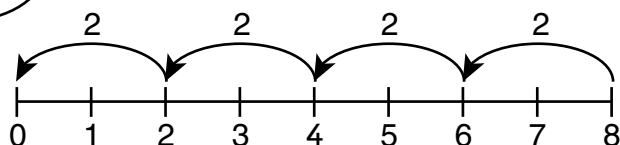
Here are 8 marbles. How many groups of 2 can you make?



$$8 \div 2 = 4$$

You can show this on a number line.

There are 4 jumps, so $8 \div 2 = 4$.

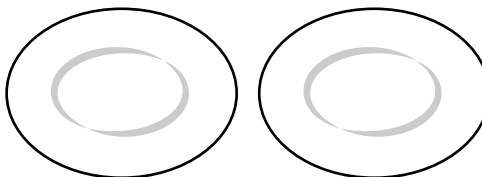
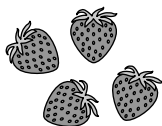


Ruby

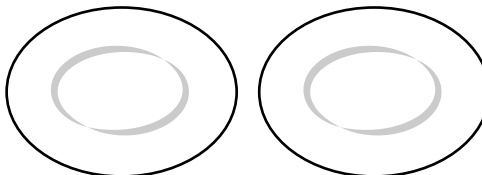
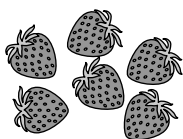


1 Find half the number of fruits by sharing them between two plates.

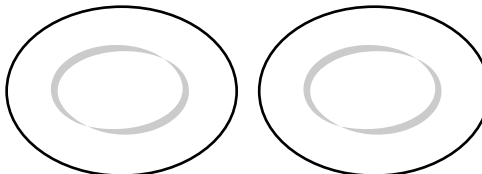
a 4 strawberries



b 6 strawberries

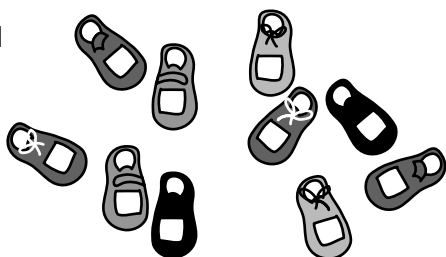


c 2 strawberries



2 Sort the shoes into groups of two to find how many pairs there are in each set.

a



b

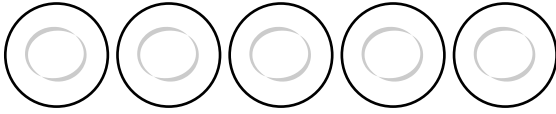


Pearl

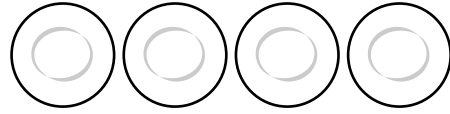


1 Share the cookies between the plates. How many will there be on each plate?

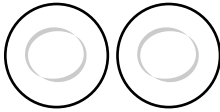
a 15 cookies



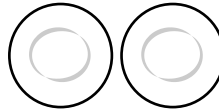
c 20 cookies



b 10 cookies

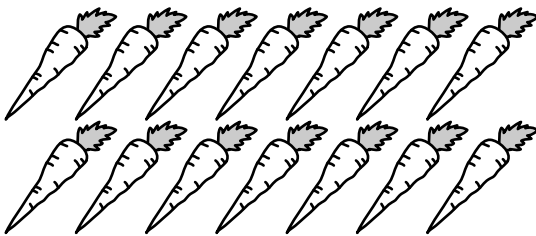


d 24 cookies



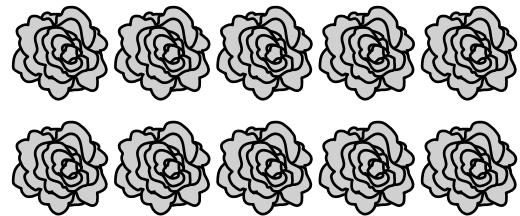
2 Find the number of groups.

a There are 14 carrots. Divide the carrots into groups of 2.



There are groups of 2 carrots.

b There are 10 cabbages. Divide the cabbages into groups of 2.



There are groups of 2 cabbages.

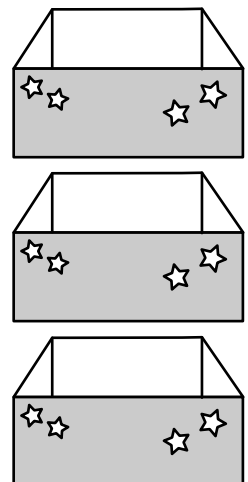
Diamond



1 There are 15 toys.

Ben tidies them away by packing them equally into 3 boxes.

How many toys are there in each box?



2 Farmer Jo has 30 chickens. If he puts 10 chickens into each chicken coop, how many coops does he need for 30 chickens?

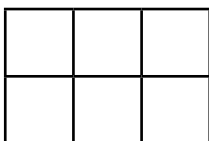
3 Mrs Smith shares 20 pencils among 10 children. Greg says he will get fewer than 3 pencils. Do you agree? Explain your reasoning.

Half

A **half** is one of two equal parts.

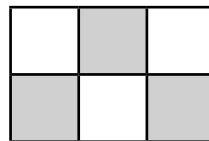
You can find half of a shape, quantity or number. You write half as $\frac{1}{2}$.

Shade half the total number of squares.



There are 6 squares in total.

$\frac{1}{2}$ of 6 is the same as $6 \div 2 = 3$.

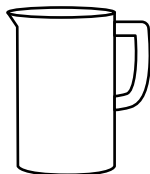


Ruby

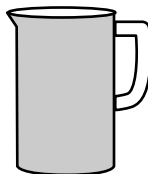


1 Write the letter of the jug that is half full.

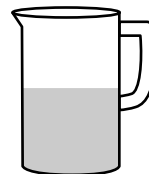
A



B

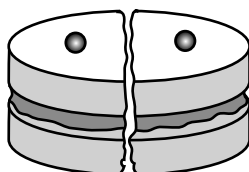


C

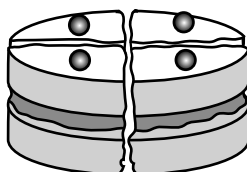


2 Write the letter of the cake that has been cut in half.

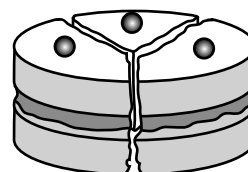
A



B



C



3 Write the letter of the bottle that is half full.

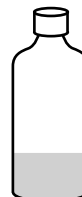
A



B

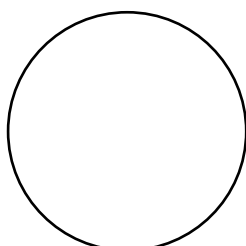


C

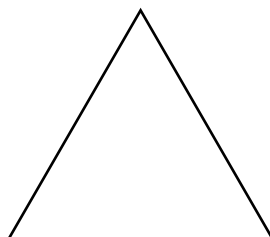


4 Copy each shape and shade half of it.

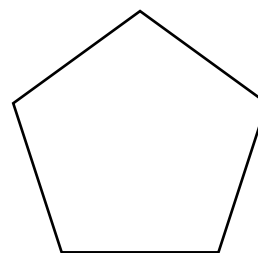
a



b



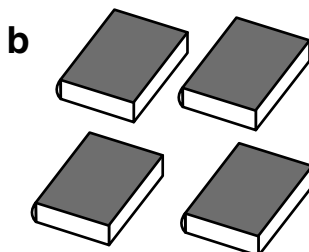
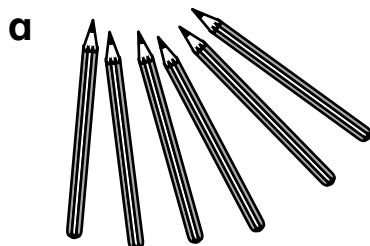
c



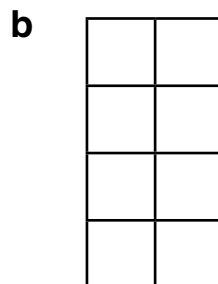
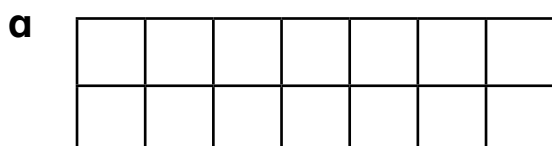
Pearl



1 Draw half the items in each set.



2 Copy each diagram and shade half the total number of squares.



3 Find $\frac{1}{2}$ of each number by dividing by 2.

a 18

c 16

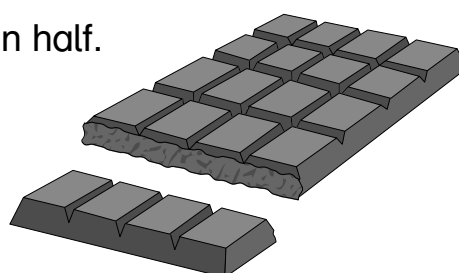
b 24

d 20

Diamond



1 Alex says this bar of chocolate has been cut in half.
Do you agree? Explain your reasoning.



2 Would you rather have $\frac{1}{2}$ of £12 or $\frac{1}{2}$ of £16?
Explain your reasoning.

3 Copy and complete this halving wall.

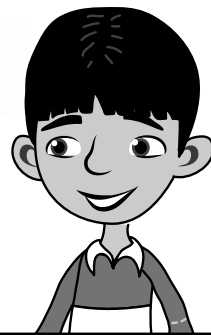
20			
10			

Quarter

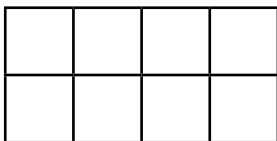
A **quarter** is one of four equal pieces.

You can find a quarter of a shape, quantity or number.

You write a quarter as $\frac{1}{4}$.

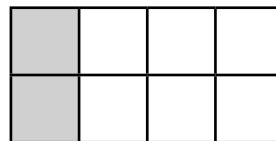


Shade one quarter of the total number of squares.



There are 8 squares in total.

$\frac{1}{4}$ of 8 is the same as $8 \div 4 = 2$.

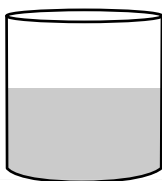


Ruby

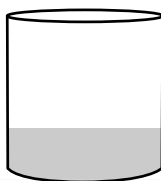


1 Write the letter of the glass that is a quarter full.

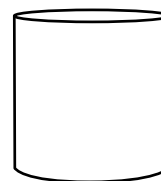
A



B

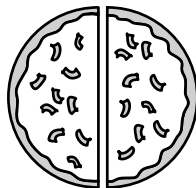


C

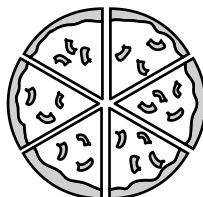


2 Write the letter of the pizza that shows it has been cut into quarters.

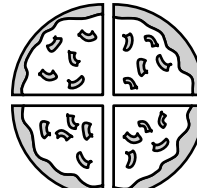
A



B

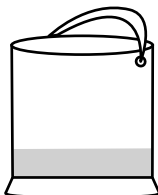


C

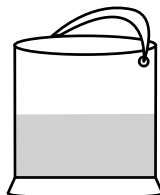


3 Write the letter of the bucket that is a quarter full.

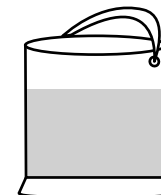
A



B

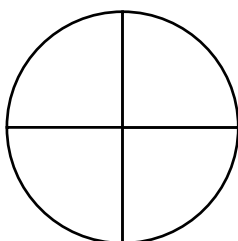


C

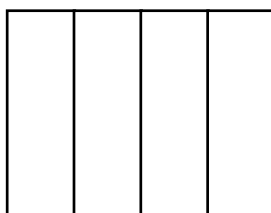


4 Copy each shape and shade one quarter of it.

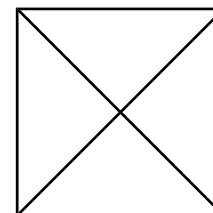
a



b



c

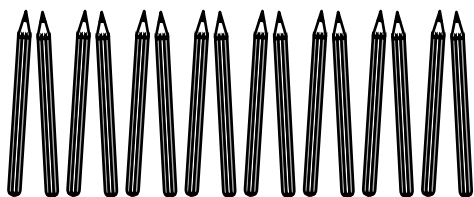


Pearl



1 Draw a quarter of the items in each set.

a



b

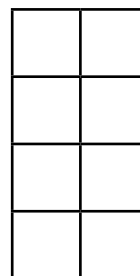


2 Copy each shape and shade a quarter of the total number of squares.

a



b



3 Find $\frac{1}{4}$ of each number by dividing by 4.

a 44

c 32

b 36

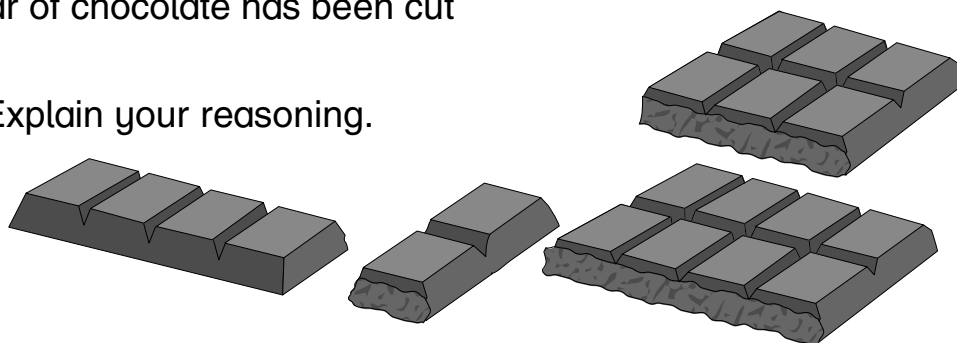
d 40

Diamond



1 Alex says this bar of chocolate has been cut in quarters.

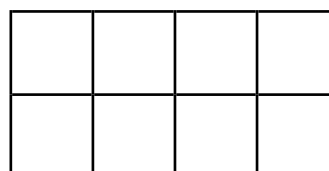
Do you agree? Explain your reasoning.



2 Would you rather have $\frac{1}{4}$ of £8 or $\frac{1}{4}$ of £12?
Explain your reasoning.

3 Copy this shape and shade $\frac{1}{4}$ of it.

How many different ways can you do it?

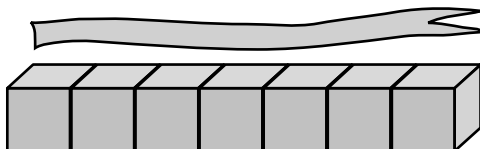


Comparing and measuring length

Length is a measure of **distance** along a line or curve.

Length can tell you **how long** or **how tall** something is.

What is the length of the piece of ribbon?



The ribbon is about 7 cubes long.

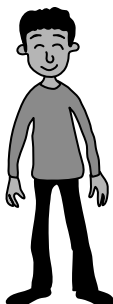


Ruby



- 1 Which child is **taller**?
Write the letter.

A

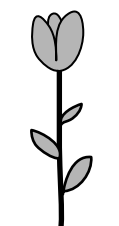


B

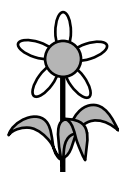


- 2 Which flower is **shorter**?
Write the letter.

A



B




- 3 Which pencil is **longer**?
Write the letter.

A



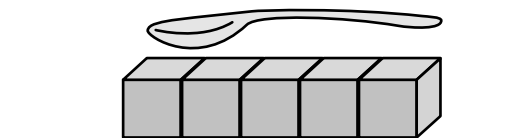
B



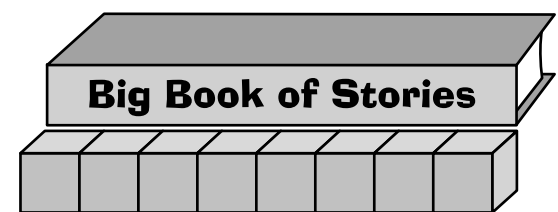
- 4  = 1 unit.

Use this unit to work out how long each item is.

- a The spoon is about units long.



- b The book is about units long.

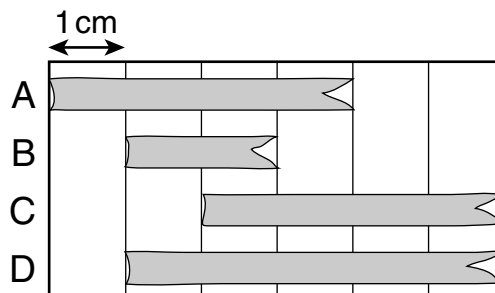


Pearl



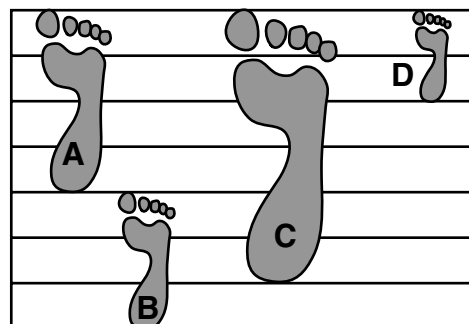
- 1 These ribbons are laid on a grid. Each square on the grid is 1 cm long.

- What is the length of ribbon C?
- Which the longest ribbon?
- Which is the shortest ribbon?



- 2 These footprints are on a measuring chart.

- Which footprint is double the length of footprint B?
- Which footprint is half the length of footprint A?



- 3 Use a ruler and pencil to draw lines of these lengths.

- 5 cm
- 10 cm
- 8 cm

- 4 Measure the pencil and then draw a line that is half that length.

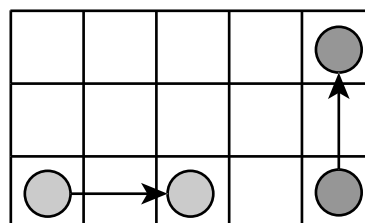


Diamond

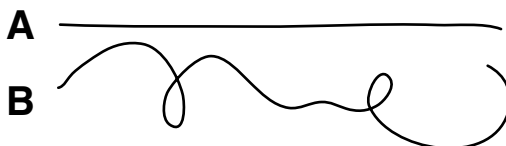


- 1 Dan says both these counters have moved the same distance on the grid.

Do you agree? Explain your reasoning.

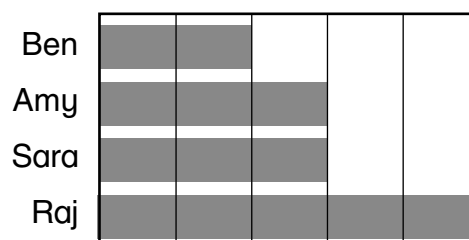


- 2 Which line is longer? Explain your reasoning.



- 3 Ben says the total length of all four bars altogether is less than 10 cm.

Do you agree? Explain your reasoning.

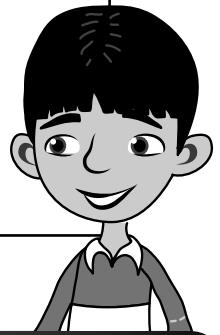
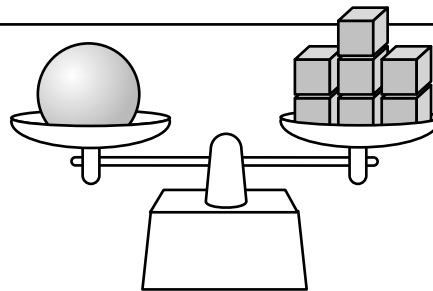


Comparing and measuring mass

Mass is the amount of materials that makes up an object.

You can **weigh** an object to find its mass.

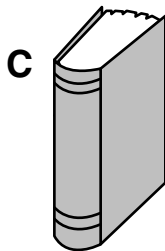
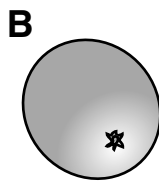
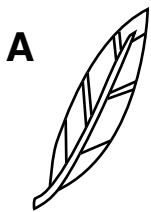
How much does this ball weigh?
The mass of the ball is 7 cubes.



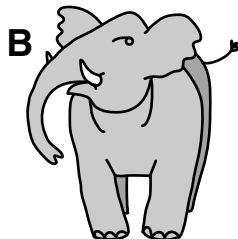
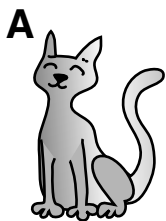
Ruby



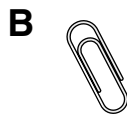
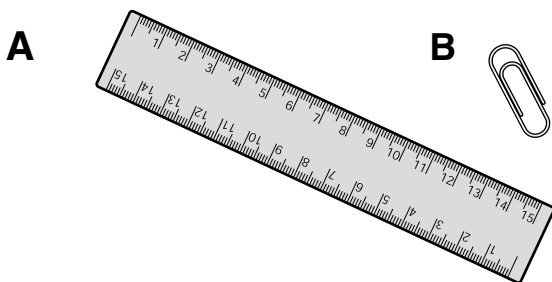
- 1 Which is the lightest item?
Write the letter.



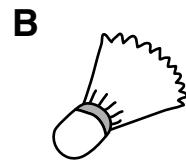
- 2 Which is the heaviest animal?
Write the letter.



- 3 Which object is the lighter?
Write the letter.

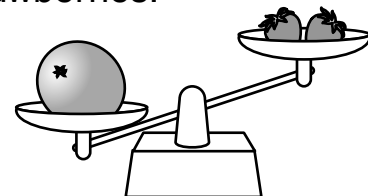


- 4 Which is heavier? Write the letter.

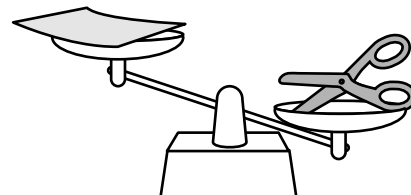


- 5 Use 'heavier than' or 'lighter than' to complete the sentence.

- a The orange is _____ than the strawberries.



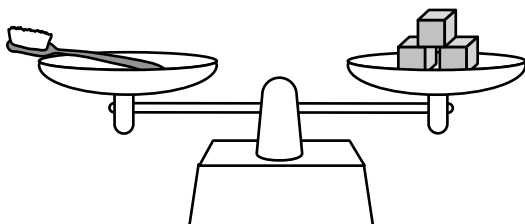
- b The sheet of paper is _____ than the pair of scissors.



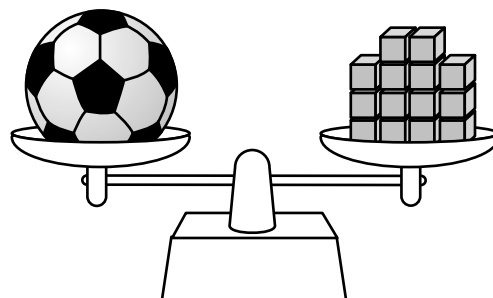
Pearl


Use  as 1 unit to find the mass of each item.

- 1 a The mass of the toothbrush is units.

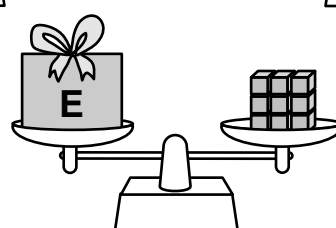
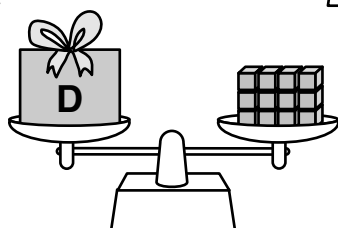
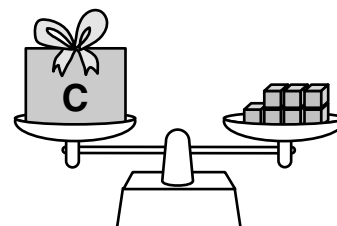
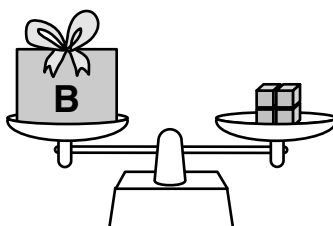
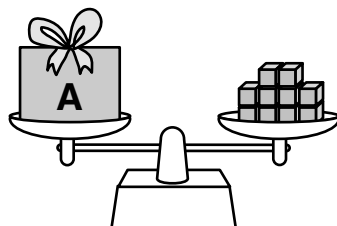
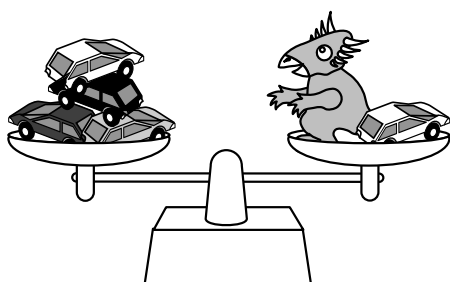


- b The mass of the football is units.



- 2 a Which is the heaviest present?
b Which is the lightest present?
c Which present is 1 unit lighter than present A?

- d Which present is 3 units heavier than present B?
e Order the presents from lightest to heaviest.


Diamond


Which statement is correct?

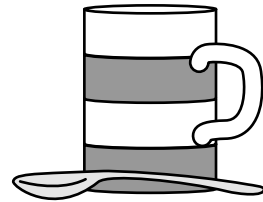
- a The dinosaur weighs the same as 4 toy cars.
b The dinosaur weighs the same as 3 toy cars.
c The dinosaur weighs the same as 5 toy cars.
- Explain your answer.

Comparing and measuring capacity

Capacity is the amount of space inside a container. It is how much liquid a container can hold.

Different containers hold different amounts.
For example, a teaspoon will have a smaller capacity than a mug.

You can describe how much a container holds using words such as **full**, **empty**, **half full**, **quarter full**, **nearly full** or **nearly empty**.

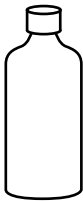


Ruby



1 Which bottle is full? Write the letter.

A



B

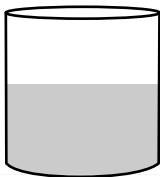


C

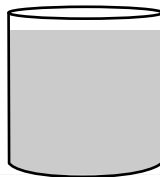


2 Which glass is nearly empty? Write the letter.

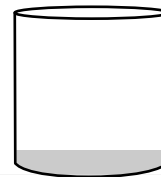
A



B



C



3 Which holds the greatest amount of liquid when full? Write the letter.

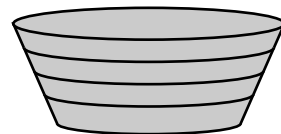
A



B

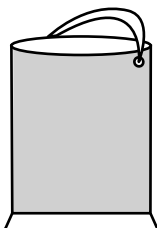


C

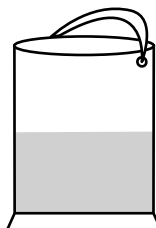


4 Which bucket is more than half full? Write the letter.

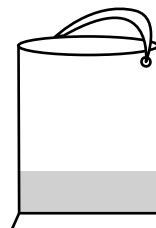
A



B



C

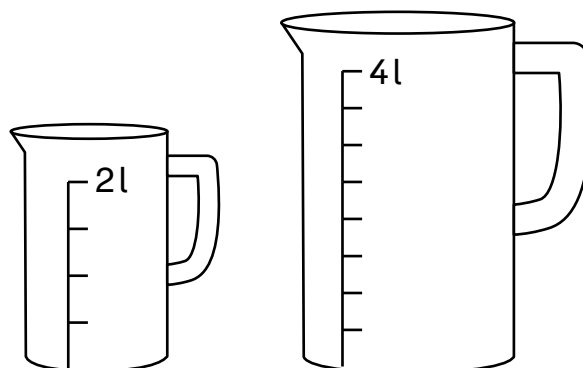


Pearl

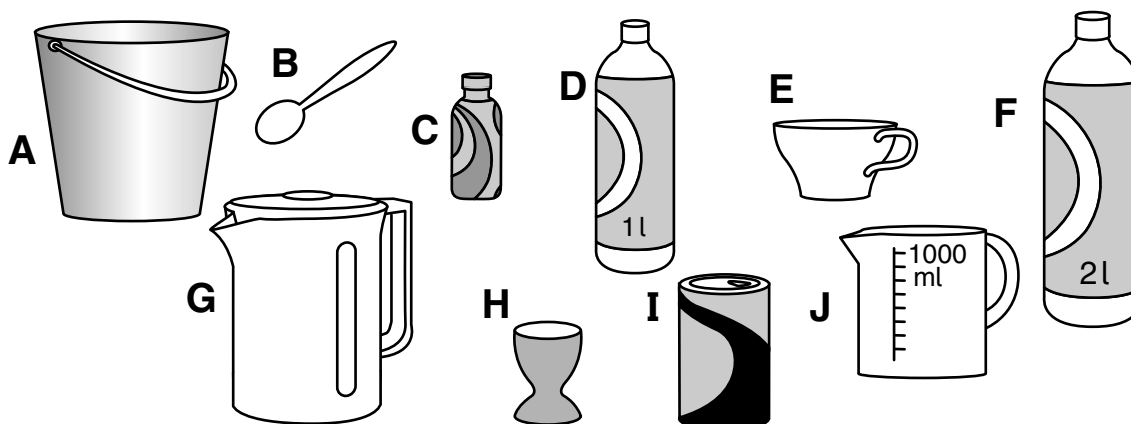


- 1 Jen has a 2-litre jug and a 4-litre jug. She pours the water from the small jug into the large jug.

Mark where the water comes to on a copy of the large jug.



- 2 Copy the table and write the letter of each container in the correct part of your table.



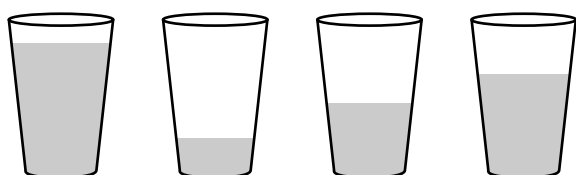
hold less than 1 litre	hold 1 litre	hold more than 1 litre

Diamond

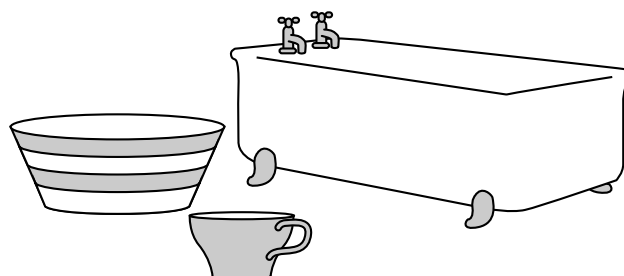


- 1 Shiv says 'All the cups contain the same quantity of lemonade'.

Do you agree? Explain your reasoning.



- 2 Jack says a bucket will hold more water than all these containers. Do you agree?



Money



Money is made up of notes and coins.

Notes and **coins** all have different values.

Tick the coin that is worth 50p.



Ruby



Write the correct value of each coin or note.

1



£10 1p 10p

6



1p £1 10p

2



50p 5p £5

7



1p £1 £10

3



2p 20p £2

8



£20 20p 2p

4



50p £5 5p

9



1p £1 10p

5



2p £2 20p

10



£50 50p 5p

Pearl



- 1 Write down the coins that are greater than 10p.



- 2 Copy the table. Sort the money into your table.



silver coins	copper coins	gold coins

Diamond



- 1 Amy has these coins in her purse.

Amy spends 10p. How much does she have left?



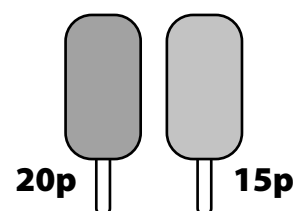
- 2 Find the total of these coins.



- 3 Dev is buying ice lollies for herself and her friend Jon.

Draw the coins Dev can use to pay for the two ice lollies.

Now draw another set of coins that Dev can use.



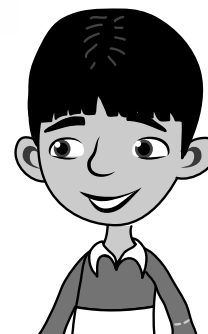
Reading clocks

An **analogue clock** has an **hour hand** and a **minute hand** to show the time.

The hour hand tells the time to the hour.

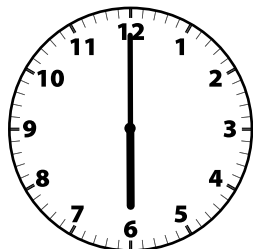
The minute hand shows how many minutes it is past the hour.

To tell the time, it helps if you can count in fives.



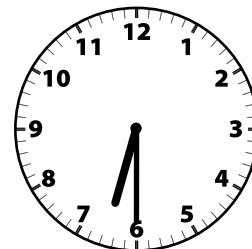
It is 6 o'clock.

The hour hand is pointing to 6 and the minute hand is at 12. No minutes have passed since 6 o'clock.



It is half past 6.

The hour hand has moved past 6 and the minute hand is at 6. It is halfway round the clockface.



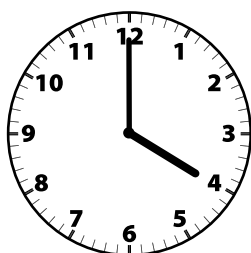
It is half an hour (30 minutes) after 6 o'clock.

Ruby

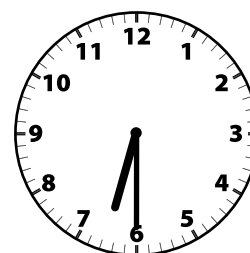


Complete each sentence.

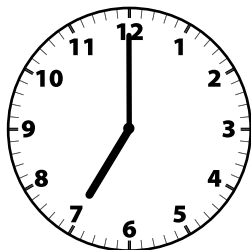
- 1 Ben plays football at _____.



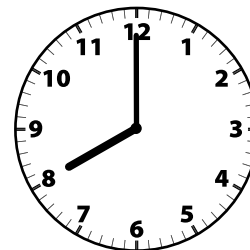
- 4 Raj plays piano at _____.



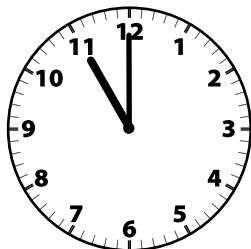
- 2 Sonia eats breakfast at _____.



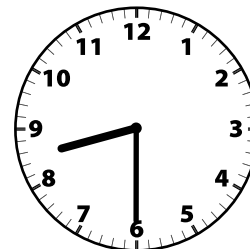
- 5 Jo goes to bed at _____.



- 3 Amy learns maths at _____.



- 6 Dev eats her breakfast at _____.

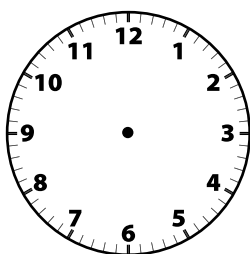


Pearl


You will need blank clock faces to answer these questions.

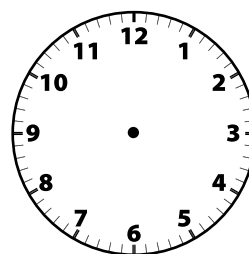
- 1 Draw the o'clock times and write a sentence about what you do at each time on any day of the week.

a



8 o'clock

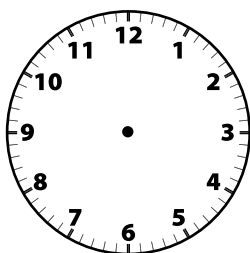
b



12 o'clock

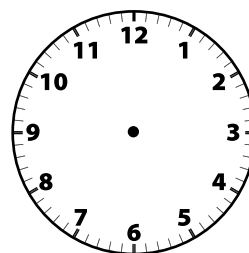
- 2 Draw the half past times and write a sentence about what you do at each time on any day of the week.

a



half past 7 in the evening

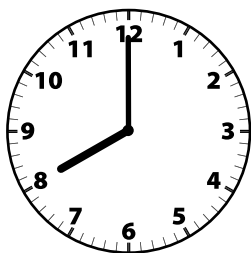
b



half past 4 in the afternoon

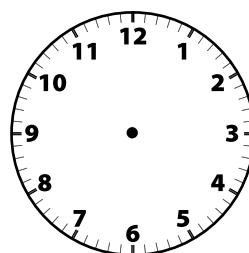
Diamond


- 1 Ben says the clock is 1 hour fast. What time should it show?

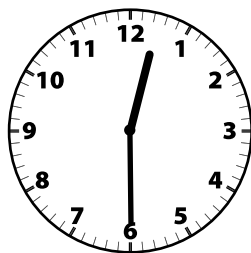


- 3 Sam's school starts at 9 o'clock. Sam went to the doctor and got to school half an hour late.

Draw the time Sam got to school on a blank clock face.



- 2 Amy says the clock is 1 hour slow. What time is it really?



Time language

There are:

seven **days** in a **week**

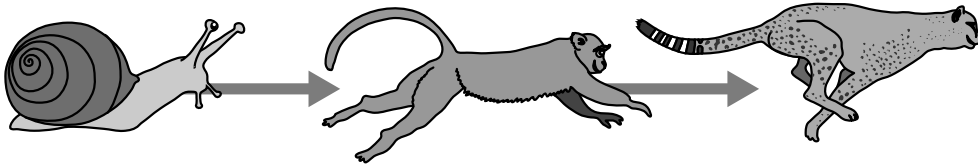
four weeks in a **month**

12 months in a **year**.

You can describe how something moves by saying it is **fast** or **slow**.



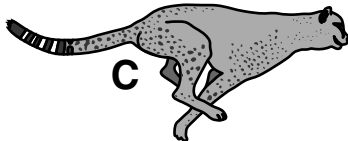
A snail travels more slowly than a monkey, but a cheetah travels faster, or more quickly, than a monkey.



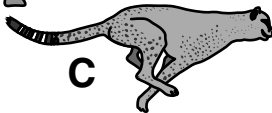
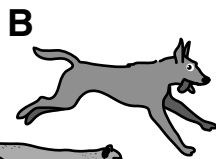
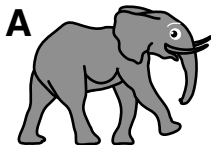
Ruby



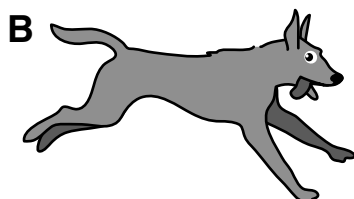
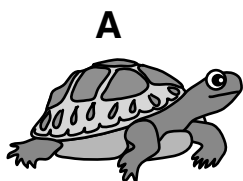
- 1 a Which animal is the slowest?
Write the letter.



- b Which animal is the fastest?
Write the letter.



- c Which animal moves more slowly?
Write the letter.



- 2 Complete this sentence using **faster than** and **slower than**.

A rhino is _____ a cheetah but
_____ than a snail.

- 3 Which day comes straight after
Tuesday?

Saturday, Monday, Wednesday

- 4 Which day comes just before
Sunday?

Monday, Saturday, Friday

- 5 Which month comes straight after
May?

April, July, June

- 6 Which month is before September?

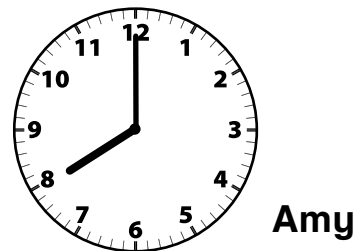
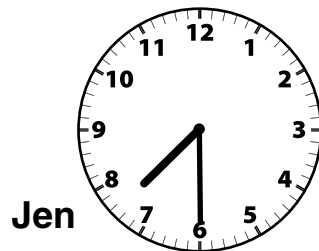
October, December, August

- 7 Which month comes straight after
December?

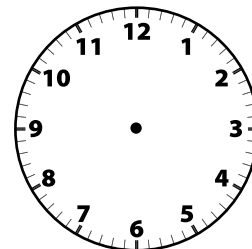
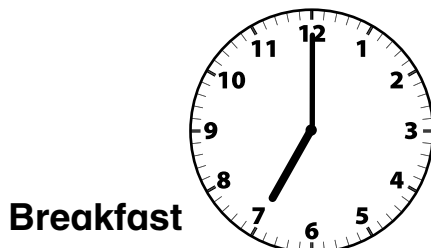
January, February, November

Pearl

- 1 Which statements are true?
 - a There are 7 days in a week.
 - b There are 10 months in a year.
 - c Monday is the first day of the week.
 - d December is first month of the year.
 - e June is the month that is halfway through the year.
- 2 These clocks show the times that Jen and Amy get out of bed.
Who got out of bed first?



- 3 Dan eats his breakfast at 7 o'clock. Write the name of the activity that he does next and draw the time on a blank clock face.

**Diamond**

- 1 Ben says all these times are shorter than 1 week.
10 seconds 1 hour 5 days 30 minutes
Do you agree? Explain your reasoning.
- 2 Write a time story using these words:
yesterday today tomorrow

2-D shapes

Two-dimensional (2-D) shapes are flat shapes.

They have length and width but no thickness.



This is a **2-D shape pattern** that follows a rule:
circle, triangle, circle, triangle ...

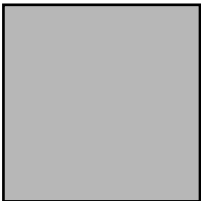


Ruby



1 Name these 2-D shapes.

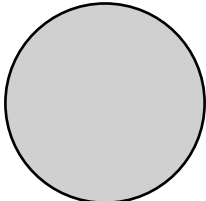
a



b

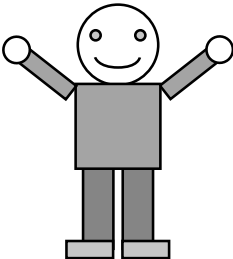


c



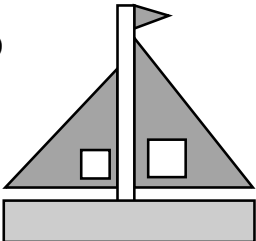
2 Count the 2-D shapes in each picture. Copy the table and write down the numbers.

a



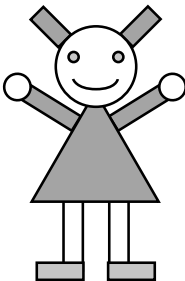
Name of shape	Number
Square	
Rectangle	

b



Name of shape	Number
Square	
Rectangle	
Triangle	

c

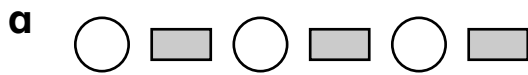


Name of shape	Number
Square	
Rectangle	
Triangle	

Pearl



1 Write the shape that comes next in each pattern.



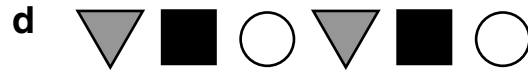
Circle or rectangle?



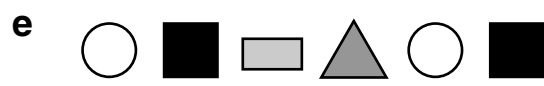
Triangle or rectangle?



Square or circle?



Circle, triangle or square?



Circle, rectangle or triangle?



Circle or square?

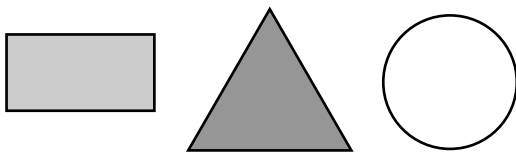
2 Draw the next two shapes in each pattern.



Diamond



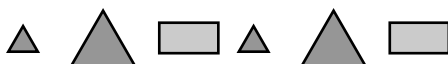
1 Jen says that one 2-D shape does not belong in this set.



Which shape do you think it is?
Explain your reasoning.

2 Sita says the next shape in the pattern will be a circle.

Explain why this is impossible.



3 Ben and Dan are playing 'Guess my shape'. They each pick a shape from a bag holding 5 different 2-D shapes.

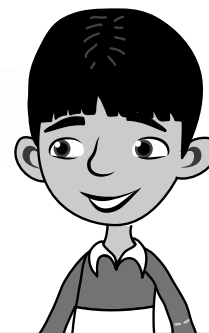
Both Ben and Dan say they have a four-sided shape.

Is this possible? Explain your reasoning.

4 Raj says a book is the same shape as a rectangle.

Explain why Raj is incorrect.

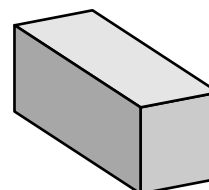
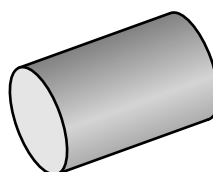
3-D shapes



Three-dimensional (3-D) shapes are solid shapes.

They have length, width and height.

These are both 3-D shapes.

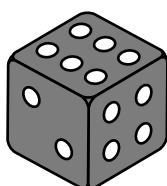


Ruby



1 Choose the correct name for the shape of each everyday 3-D object.

a



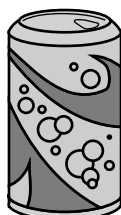
Cube or pyramid?

c



Cube or cuboid?

b



Cube or cylinder?

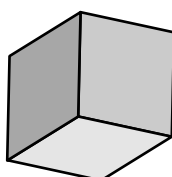
d



Sphere or cylinder?

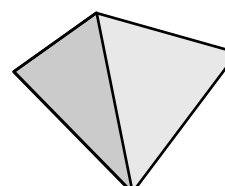
2 Match the correct label to each 3-D shape.

a



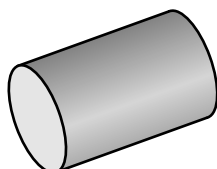
cuboid cube square

c



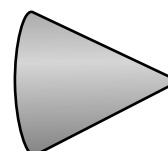
cone triangle pyramid

b



cone circle cylinder

d

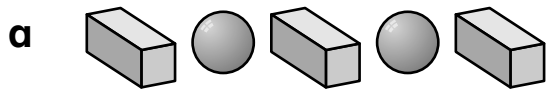


cuboid cube cone

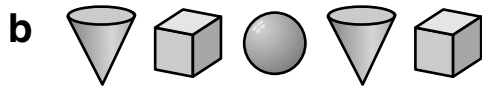
Pearl



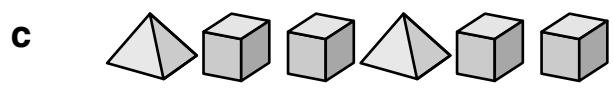
1 Choose the shape that comes next in each pattern.



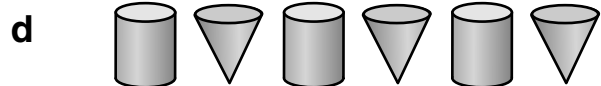
Cuboid or sphere?



Cone, cube or sphere?



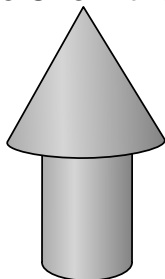
Pyramid or cube?



Cylinder or cone?

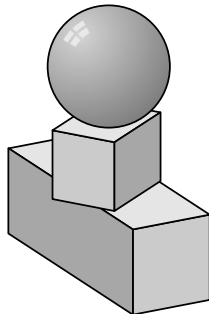
2 Copy the table. Look at each 3-D model and put a tick (✓) or cross (✗) in your table to show the shapes that are used in the model.

a



Name of shape	Tick or cross
Sphere	
Cylinder	
Cube	
Cone	

b

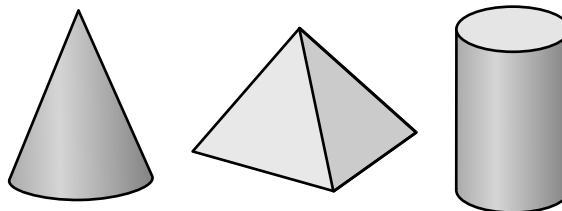


Name of shape	Tick or cross
Sphere	
Cuboid	
Cube	
Cone	

Diamond



1 Jen says that one 3-D shape does not belong in this set. Which shape do you think it is? Explain your reasoning.



2 Ben and Dan are playing 'Guess my shape'. They each pick a shape from a bag holding 5 different 3-D shapes.

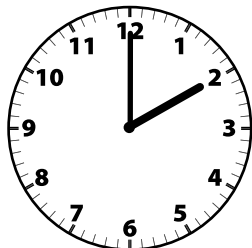
Both Ben and Dan both say they have a shape with 6 faces. Is this possible?

Position

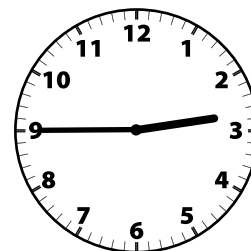
There are lots of different words to describe the **position** of an object.

Left, right, top, middle, bottom, on top of, in front of, above, below, under, beneath, between, around, near, close, far, up, down, forwards and backwards, half turn, quarter turn, three-quarter turn, inside and outside.

Here is a clock face.



If the minute hand makes a three-quarter clockwise turn, what time will it show?



Ruby



1 Choose the correct word to complete the sentence.

a The jug is _____ the table.



on top of between behind

b The cat is _____ the tree.



in the middle of inside in front of

c The present is _____ the bag.



behind on top of inside

d The bike is _____ the cars.



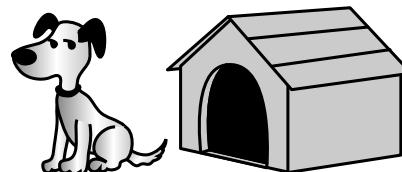
on top of between behind

e The aeroplane is _____ the clouds.



inside above in the middle of

f The dog is _____ the kennel.



between above outside

Pearl



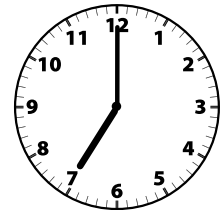
1 Here is a number square.

4	5	6
14	★ 15	16
24	25	26

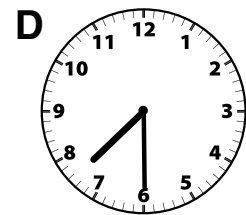
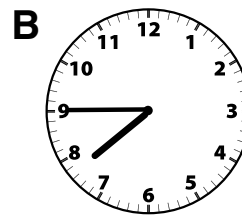
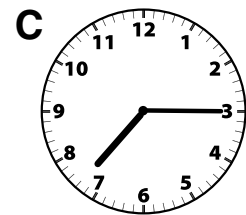
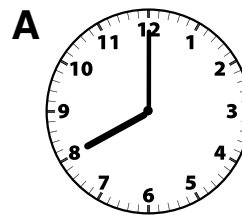
- Write the number that is to the left of the star number.
- Write the number that is to the right of the star number.
- Write the number that is on top of the star number.
- Write the number that is below the star number.

2 Here is a clock face.

Write the letter of the correct clock after the minute hand makes:



- a quarter turn clockwise
- a half turn clockwise
- a three-quarter turn clockwise
- a whole turn clockwise.



Diamond



1 Jen puts her finger on START. She moves right one square, up one square, up one square, left one square and then down one square. She says she will land on the star shape.

Do you agree? Explain your reasoning.

2 Max puts his finger on START. He moves right two squares, up one square and then left one square. He says he will land on the circle shape.

Do you agree? Explain your reasoning.

		★
START		

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