Mathematics 2

Read the following with your child:

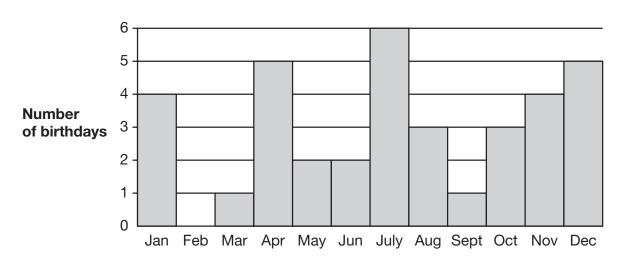
- 1. This is a multiple-choice paper, in which you have to mark your answer to each question on the separate answer sheet. You should mark only one answer for each question.
- 3. Be sure to keep your place in the correct section of the answer sheet. Mark your answer in the box that has the same number as the question in the booklet.
- 4. You may find some of the questions difficult. If you cannot do a question, do not waste time on it but go on to the next. If you are not sure of an answer, choose the one you think is best.
- 5. Work as quickly and as carefully as you can.

Familiarisation



How many 10p coins can I get for £1.80?

- A 10 coins
- B 18 coins
- C 88 coins
- **D** 108 coins **E** 180 coins



This bar chart shows during which months the children in a class have their birthdays.

During which month are there most birthdays?

- A April
- **B** December
- C January
- D July E November

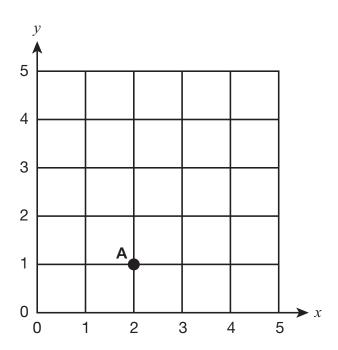
Change the order of the figures 6085 to make the biggest number possible.

- A 8605
- B 6850
- **C** 8650
- D 6580
- E 8560

The time in New York is 5 hours behind the time in London. In London it is 9 am.

What time is it in New York?

- A 14:00
- **B** 04:00
- **C** 05:00
- D 4pm
- E 5pm



What are the co-ordinates of A?

- **A** (1, 2) **B** (1, 1) **C** (2, 0) **D** (2, 2) **E** (2, 1)

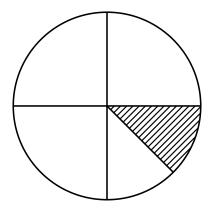
Write this number in figures:

eight thousand and twenty-five

- **A** 8250 **B** 80025 **C** 8205 **D** 8025 **E** 800025

Share 240 into 4 equal parts.

- **A** 80 **B** 60 **C** 65 **D** 40 **E** 70



What fraction of this circle is shaded?

- **A** $\frac{1}{12}$ **B** $\frac{1}{5}$ **C** $\frac{1}{4}$ **D** $\frac{1}{6}$ **E** $\frac{1}{8}$

In the number 836, what does the 3 stand for?

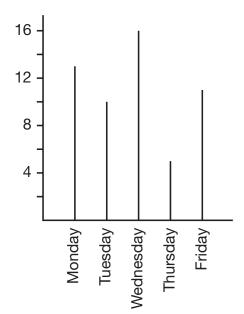
- A 3 hundreds
- **B** 3 ones
- C 3 thousands
- D 3 hundredths
- E 3 tens

What number would go in the box? 10

$$\frac{3}{4} = \frac{\boxed{}}{8}$$

- **A** 5
- **B** 6
- **C** 7
- **D** 9 **E** 12

Sati records how many children visit the school library each day. This is the bar chart Sati draws to show her data.



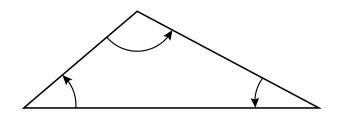
How many children visited the library over the five days?

- **A** 55
- **B** 54
- **C** 53
- **D** 52
- **E** 51
- Three pieces of wood are cut from a plank 1 metre long. Each piece is 30 cm long.

How long is the piece left over?

- **A** 10 cm
- **B** 40 cm
- **C** 70 cm
- D 910 cm
- **E** 970 cm

13



What is the sum of the interior angles of this triangle?

- **A** 90°
- **B** 135°
- **C** 180°
- D 270°
- E 360°

A 15 **B** 14 **C** 13 **D** 4

E 3

What is the next number in this sequence?

49 37 43 31

A 27

B 21 **C** 25

D 23

E 29

16



The thermometer shows the temperature in Kiev. London is 18° warmer.

What is the temperature in London?

A 17°

B 16° **C** 15°

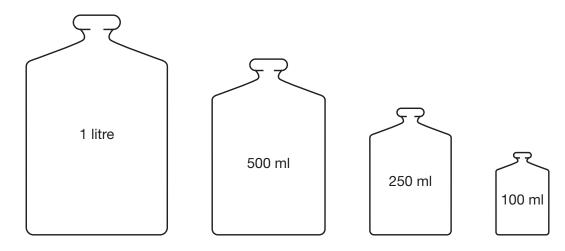
D 14° **E** 13°

 $324 \div 6 =$

A 44

B 54 **C** 56 **D** 58 **E** 64

Look at these bottles.



How many times would you have to fill the 250 ml bottle to make 1 litre?

- A 8 times
- **B** 14 times
- C 4 times
- D 3 times
- E 40 times

19

There were 24 marbles in a bag.

I took out $\frac{1}{3}$ of the marbles.

How many marbles did I take out?

- **A** 16
- **B** 17
- **C** 9
- **D** 8
- **E** 18

20

Karen wants to buy a guitar.

She has saved £43.95

The guitar costs £65.00

How much more money does she need?

- A £22.05
- **B** £21.05
- **C** £20.05
- D £12.05
- **E** £11.05

Put these numbers in order from the smallest to the biggest.

0.525 0.7 0.35 0.175

- **A** 0.7, 0.525, 0.35, 0.175
- **B** 0.175, 0.525, 0.35, 0.7
- **C** 0.175, 0.35, 0.525, 0.7
- **D** 0.7, 0.35, 0.175, 0.525
- **E** 0.175, 0.35, 0.7, 0.525

22

8 chocolate bars cost £5.20.

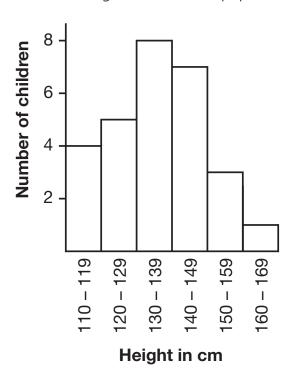
How much do 6 chocolate bars cost?

- **A** £3.75
- **B** £3.80
- **C** £3.85
- **D** £3.90
- **E** £3.95

What is 50% of 40?

- **A** 16
- **B** 20 **C** 25
- **D** 8
- **E** 18

The bar chart shows the heights of a class of pupils.



Which statement MUST be true?

- A 1 child is exactly 165 cm tall.
- **B** 5 children have a height between 120 cm and 129 cm.
- C No children have a height less than 111 cm.
- D 7 children have a height more than 140 cm but less than 150 cm.
- **E** 8 children have a height of less than 139 cm.

25

A television programme finished at 4.55 pm. It lasted for three-quarters of an hour.

At what time did it start?

A 4.15 pm

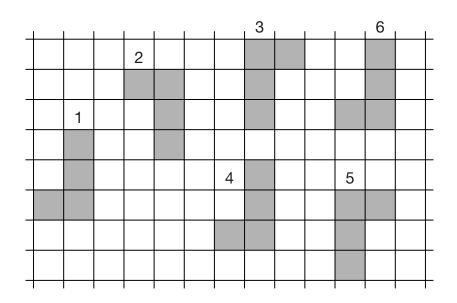
B 4.10 pm

C 4.05 pm

D 4.25 pm

E 4.20 pm

Which of these moves is not a translation?



- **A** $3 \to 5$ **B** $4 \to 1$ **C** $6 \to 4$ **D** $5 \to 2$ **E** $1 \to 6$

Zoey has a large carpet in her room. It is 5 metres long and 4 metres wide.

What is the distance all around the edge of the carpet?

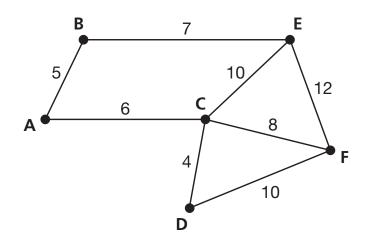
- **A** 14 m
- **B** 16 m
- **C** 18 m
- **D** 19 m
- **E** 20 m

Ella paid £780 per month in rent.

How much rent did she pay in 12 months?

- A £2340
- **B** £8360
- C £8580
- **D** £9260 **E** £9360

The diagram shows the distance in kilometres between some towns. Sophia drove at a speed of 60 kilometres per hour for 20 minutes.



Which of the following routes shows how far Sophia travelled?

- A ABEF
- **B** ACDF
- **C** ACEF
- D ACFD
- **E** ABEC

30

An empty box weighs 150 grams. When it is filled with paper it weighs 1 kilogram.

How much does the paper weigh?

- **A** 350 g
- **B** 750 g
- **C** 850 g
- **D** 950 g
- **E** 9850 g

31

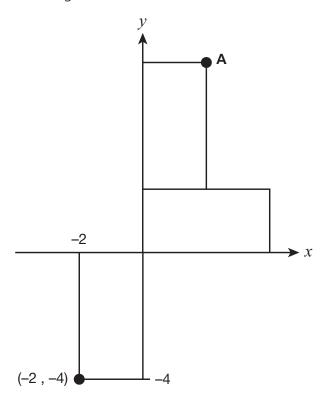
Look at the table of pocket money.

Name	Pocket money
Seema	£10.00
Mariam	£5.00
Charlie	£6.00
Xavier	£4.00
Jamie	£6.00
Lucas	£7.00
Gabriella	£4.00

What is the average amount of pocket money?

- A £4.00
- **B** £5.00
- **c** £6.00
- **D** £7.00
- **E** £7.50

Three identical rectangles are drawn.



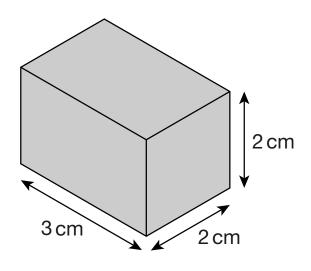
What are the co-ordinates of A?

- **A** (4, 6) **B** (2, 4) **C** (6, 2) **D** (2, 6) **E** (4, 8)

$$3a = 36$$

- **A** 12
- **B** 18
- **C** 24
- D 26
- **E** 28

What is the volume of this block?



- A 12 cm³
- **B** 16 cm³
- C 18 cm³
- **D** 36 cm³ **E** 48 cm³

35

I buy 1 large pack of batteries for £5 and 2 small packs priced at £2 per pack.



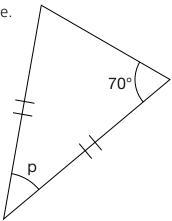


What is the average cost of a battery across the 3 packs?

- **A** 34p
- **B** 48p
- C 45p
- **D** 38p
- **E** 35p

- **A** 7.802
- **B** 7.82
- **C** 7.822
- D 8.00
- **E** 7.102

This is an isosceles triangle.



What is the size of the angle labelled p?

- **A** 30°
- **B** 40°
- **C** 55°
- D 70°
- E 110°

38

Muhammed must get up at 07.30 hours. He goes to bed at 22.38 hours the night before.

How long does he spend in bed?

- A 8 hours 22 minutes
- **B** 8 hours 42 minutes
- C 8 hours 52 minutes
- D 9 hours 42 minutes
- **E** 9 hours 52 minutes

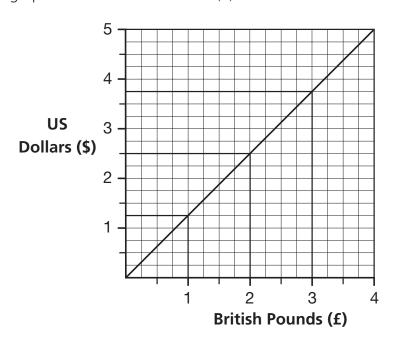
39

Liam carried ten parcels. Each parcel weighed 250 grams.

How many KILOGRAMS was this altogether?

- **A** 25 kg
- **B** 2.50 kg
- C 2.25 kg
- **D** 0.25 kg
- **E** 0.025 kg

This graph converts British Pounds (£) to United States Dollars (\$).



How many Dollars (\$) is £34?

- **A** \$42.50
- **B** \$47.50
- **C** \$45
- D \$42.05
- **E** \$27.20

What is 19.706 correct to 2 decimal places?

- **A** 19.72
- **B** 19.70
- **C** 19.76
- **D** 19.80 **E** 19.71

42

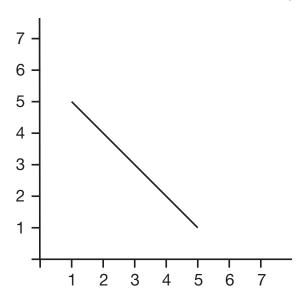
A packet of biscuits costs x pence.

I buy 6 packets.

Which expression shows how much change I will get from £5?

- **A** 5 6x
- **B** 500 6*x*
- c 6x 5
- **D** 500 60x **E** 6x 500

The end points of five lines are shown in the answer options below.



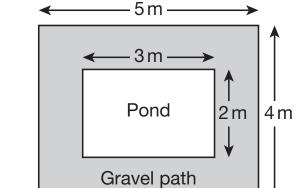
Which line is parallel to the line in the diagram?

- **A** (3, 1) and (1, 4)
- **B** (2, 6) and (4, 3)
- **C** (5, 1) and (1, 5)
- **D** (2, 5) and (4, 2)
- **E** (5, 2) and (1, 6)

44

A gravel path 1 metre wide is put around a pond.

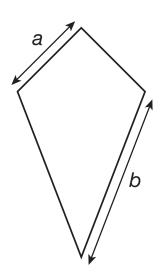
1 bag will cover $\frac{1}{2}$ m². Each bag of gravel costs £4.99.



What is the approximate cost of the path?

- A £200
- **B** £35
- **C** £60
- **D** £70
- E f140

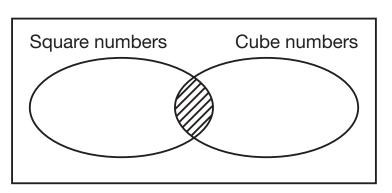
- **A** $\frac{17}{10}$ **B** $\frac{1}{17}$ **C** $\frac{10}{17}$ **D** $\frac{17}{100}$ **E** $\frac{17}{11}$



What is the formula for the perimeter of this kite?

- **A** a + b **B** 2a + 2b **C** $a \times b$ **D** 2a + b **E** $2a \times 2b$

47



Which number is in the shaded part of the Venn diagram?

- **A** 36
- **B** 64
- **C** 81
- **D** 100
- **E** 125

Adrian's garden measures 10 m by 6 m.

Paving stones measure $\frac{1}{2}$ m by $\frac{1}{2}$ m.

How many paving stones does he need to pave his garden?

A 180

B 240

C 15

D 30

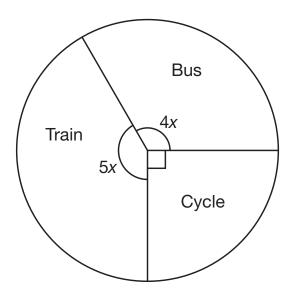
E 120

What is the mean of these expressions?

3x - 1 5x + 6 4x + 1

A 12x + 6 **B** 6x + 3 **C** 4x + 2 **D** 5x + 4 **E** 3x + 5

This pie chart shows how children travel to school on one day.



135 children cycle to school on that day.

How many travel by bus on that day?

- A 45 children
- B 120 children
- C 150 children
- D 180 children
- E 210 children

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