FAMILIARISATION ANSWER SHEET - MATHEMATICS 1

GL Assessment

Candidate's Name

School Name

DATE OF TEST

Day		Month		Year	

CANDIDATE NUMBER

SCHOOL NUMBER

DATE OF BIRTH

Day		Month		Year	

Please mark boxes with a thin horizontal line like this ▬.

1	2	3	4	5	6	7	8	9
5190	0.5	7 thousands	(6 , 1)	367	10	1.45 m	3/10	123
5019	1	7 hundreds	(1 , 6)	368	9	1.63 m	1/3	0
519	3	7 tens	(5 , 6)	365	8	1.65 m	3/8	0.1
51009	4	7 ones	(6 , 3)	369	6	1.405 m	1/4	0.5
5109	6	7 thousandths	(1 , 7)	366	4	1.603 m	3/11	1

10	11	12	13	14	15	16	17	18
19	0.3 l	6.5 hours	4 weeks	12	7:15	3	45 mins	£82.00
1	0.25 l	7 hours	8 weeks	15	7:25	7	55 mins	£62.63
–1	400 ml	7.5 hours	9 weeks	18	19:25	10	65 mins	£62.00
21	0.35 l	8 hours	10 weeks	21	19:15	12	75 mins	£61.50
–19	200 ml	8.5 hours	14 weeks	24	21:15	14	95 mins	£46.50

19	20	21	22	23	24	25	26	27
30 millilitres	A	6 mins	1%	2 weeks	A	A	4	4
300 millilitres	B	10 mins	5%	3 weeks	B	B	5	2
3 litres	C	13 mins	10%	4 weeks	C	C	6	5
30 litres	D	16 mins	20%	7 weeks	D	D	7	1
300 litres	E	26 mins	50%	8 weeks	E	E	15	3

28	29	30	31	32	33	34	35
£2.80	0.36	1850	12	3168	A	37.8°C	7/8 3/4 5/8 1/2 1/4
£3.40	0.036	1875	18	3173	B	47.5°C	7/8 5/8 3/4 1/2 1/4
£3.50	36	1895	22	7920	C	34.5°C	3/4 7/8 5/8 1/2 1/4
£4.20	360	1900	24	7925	D	37.2°C	7/8 3/4 1/2 5/8 1/4
£4.40	36.6	1910	26	7950	E	40.5°C	7/8 5/8 1/2 3/4 1/4

36	37	38	39	40	41	42	43	44
4 kg	5	21 boys	5	9	CMLXXXIV	A	10.5 m	A
4.5 kg	6	18 boys	25	12	MLXVI	B	75 cm	B
40 kg	9	16 boys	27	15	DCCCLXXXIV	C	150 cm	C
4000 kg	18	14 boys	27.5	16	MCDLXIV	D	5.25 m	D
4500 kg	27	9 boys	30	18	MDLXXXVI	E	125 cm	E

45	46	47	48	49	50
2 hours	27	bicycle	5/12	2.25 kg	20 litres
4 hours	37	bus	1/2	1.25 kg	34 litres
6 hours	127	car	1/4	1.8 kg	1.5 litres
8 hours	137	train	1/12	2.7 kg	4 litres
10 hours	687	walk	1/6	1.35 kg	2 litres

END OF TEST

Mathematics 1

Familiarisation

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.
2. Draw a firm line clearly through the rectangle next to your answer like this . If you make a mistake, rub it out as completely as you can and put in your new answer.
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.**

GL Assessment

1 **What is this number in figures?**

five thousand, one hundred and nine.

A 5190 **B** 5019 **C** 519 **D** 51009 **E** 5109

2  stands for 12 ships.

Look at this table.

Dock	Number of Ships
A	
B	
C	

How many more ships are in dock A than dock C?

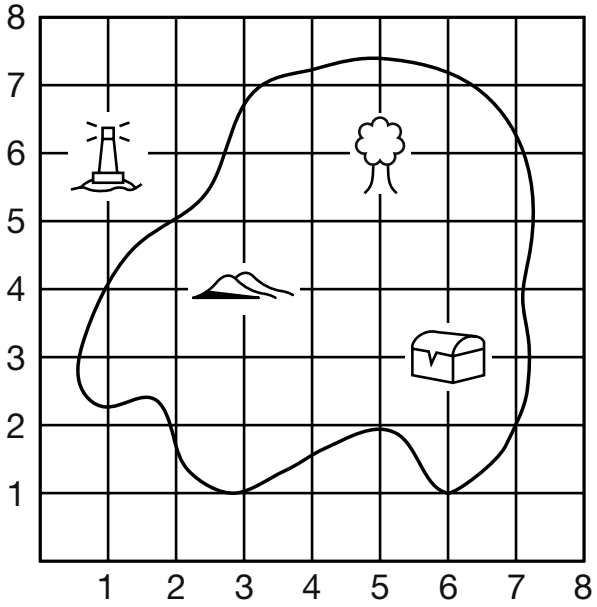
A 0.5 **B** 1 **C** 3 **D** 4 **E** 6

3 **What is the value of the 7 in this number?**

7240

A 7 thousands
B 7 hundreds
C 7 tens
D 7 ones
E 7 thousandths

4



The hills are at (3 , 4).

The lighthouse is at (,).

A (6 , 1) **B** (1 , 6) **C** (5 , 6) **D** (6 , 3) **E** (1 , 7)

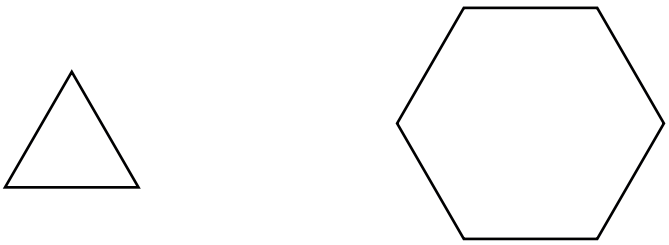
5

What is the missing number in this sequence?

393 384 375 ☐ 357

A 367 **B** 368 **C** 365 **D** 369 **E** 366

6



How many of the triangles will fill the hexagon?

A 10 **B** 9 **C** 8 **D** 6 **E** 4

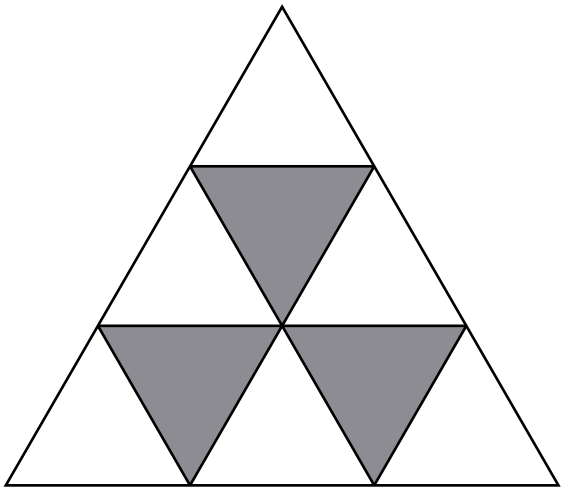
7

Iveta was 1.43 metres tall.
She grew 2 centimetres more.

How tall was she then in metres?

A 1.45 m **B** 1.63 m **C** 1.65 m **D** 1.405 m **E** 1.603 m

8



What fraction of the whole shape is shaded?

A $\frac{3}{10}$ **B** $\frac{1}{3}$ **C** $\frac{3}{8}$ **D** $\frac{1}{4}$ **E** $\frac{3}{11}$

9

Write the correct number in the box.

123 ÷ ☐ = 123

A 123 **B** 0 **C** 0.1 **D** 0.5 **E** 1

10

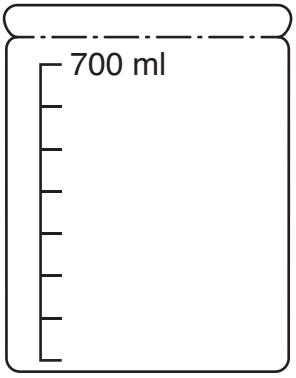
$a - 9 = 10$

a = ?

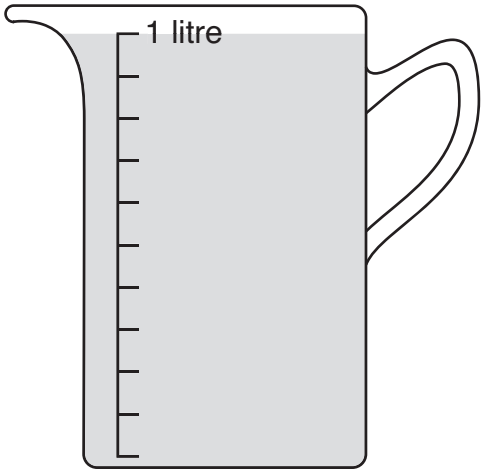
A 19 **B** 1 **C** –1 **D** 21 **E** –19

11

An empty jar = 700 ml



A jug holding 1 litre of water



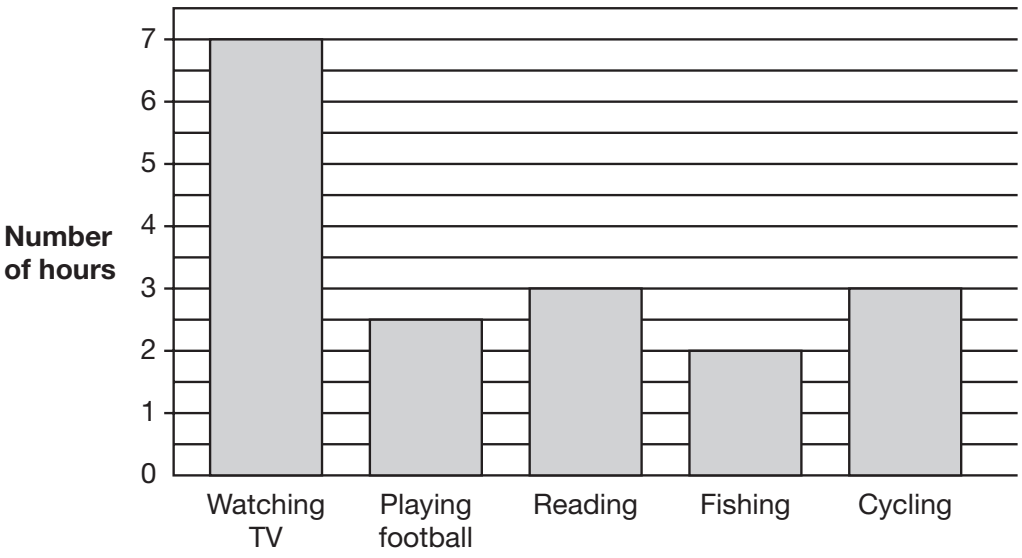
The jug holds 1 litre of water.
The jar is **filled** from the jug.

How much water will be left in the jug?

A 0.3 l **B** 0.25 l **C** 400 ml **D** 0.35 l **E** 200 ml

12

This chart shows how Kai spent his spare time last week.



How many hours did he spend out of doors?
(playing football, fishing and cycling)

A 6.5 hours **B** 7 hours **C** 7.5 hours **D** 8 hours **E** 8.5 hours

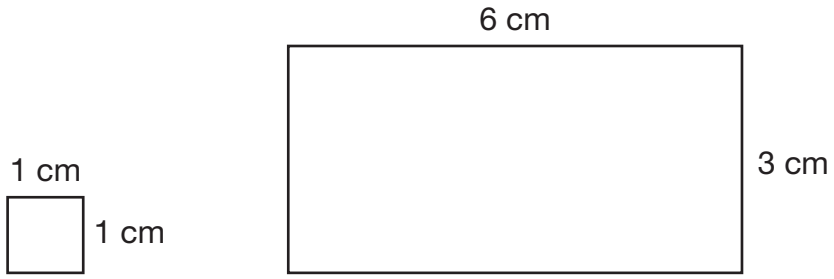
13

Wendy saved £2.50 a week.

How many weeks did it take her to save £20?

A 4 weeks **B** 8 weeks **C** 9 weeks **D** 10 weeks **E** 14 weeks

14

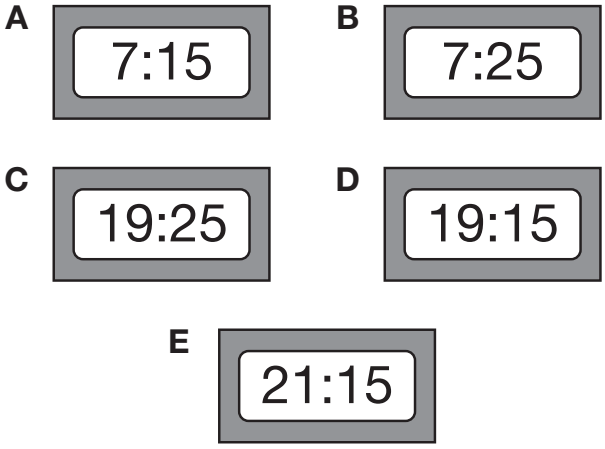


How many small squares will fit into the large rectangle?

A 12 **B** 15 **C** 18 **D** 21 **E** 24

15

Which of these digital alarm clocks shows that it is quarter past seven in the evening?



A 7:15 **B** 7:25 **C** 19:25 **D** 19:15 **E** 21:15

16

Matthew thinks of a number.
He multiplies his number by 2.
Then he subtracts 4.
The answer is 10.

What number did Matthew first think of?

A 3 **B** 7 **C** 10 **D** 12 **E** 14

17

A train left at 10.20.
It arrived at 11.15.

How long did the journey take, in minutes?

A 45 mins **B** 55 mins **C** 65 mins **D** 75 mins **E** 95 mins

18

Join Heritage today! Take advantage of this great offer now.

Type of membership	Normal price	Offer price
Individual member	~~£47.90~~	£35.63
Joint membership (2 adults)	~~£79.50~~	£59.63
Family group (2 adults and children under 18)	~~£82.00~~	£61.50
Family one adult (1 adult and children under 18)	~~£62.00~~	£46.50
Young person – aged 13–25	~~£21.50~~	£16.13

Mrs Ward wants to join Heritage with her three children, aged 10, 12 and 15.

How much must she pay?

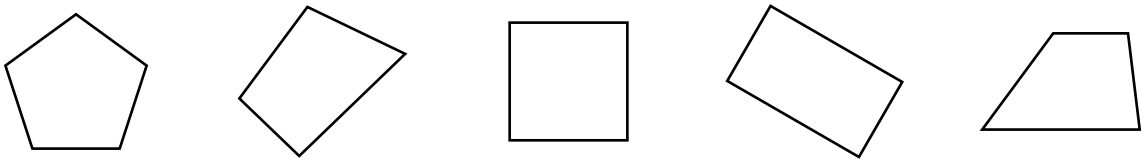
A £82.00 **B** £62.63 **C** £62.00 **D** £61.50 **E** £46.50

19

About how much does an ordinary mug hold?

A 30 millilitres
B 300 millilitres
C 3 litres
D 30 litres
E 300 litres

20



A **B** **C** **D** **E**

Which of these is NOT a quadrilateral?

A A **B** B **C** C **D** D **E** E

21

Here is part of a train timetable.

Purley	. . . .	. . . .	. . . .	23:21	. . . .
East Croydon	22:56	23:01	23:10	23:27	23:30
Norwood Junc.	. . . .	. . . .	. . . .	. . . .	. . . .
London Bridge	. . . .	. . . .	. . . .	. . . .	. . . .
Clapham Junc.	23:07	23:13	23:21	23:37	23:40
Victoria	23:12	23:18	23:27	23:43	23:45

A train leaves East Croydon at 23:27.

How long does it take to get to Victoria?

A 6 mins **B** 10 mins **C** 13 mins **D** 16 mins **E** 26 mins

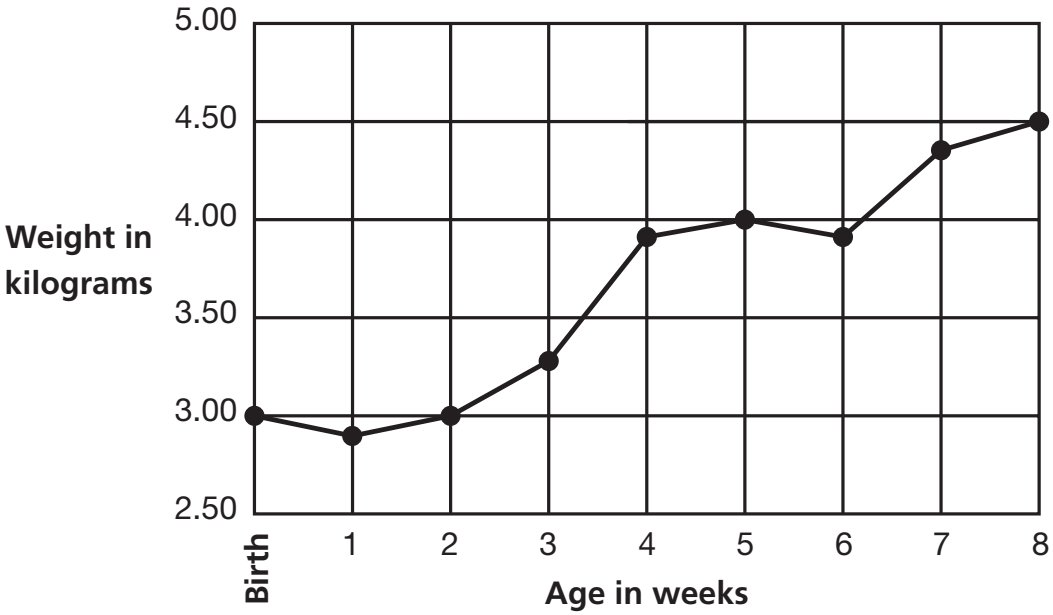
22

What percentage of £5 is 50p?

A 1% **B** 5% **C** 10% **D** 20% **E** 50%

23

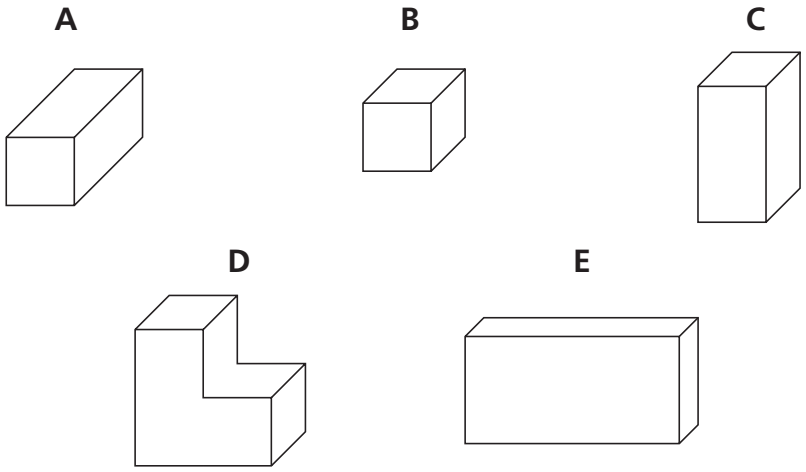
The graph shows the weight of a baby girl in the first 8 weeks of her life.



How old was the baby at the end of the week in which she gained most weight?

A 2 weeks **B** 3 weeks **C** 4 weeks **D** 7 weeks **E** 8 weeks

24

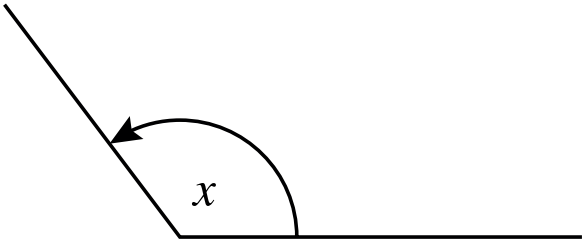


Which of these shapes is NOT a cuboid?

A A **B** B **C** C **D** D **E** E

25

Look at this angle.



Select the correct answer.

A Angle x is less than 90 degrees.
B Angle x is a right angle.
C Angle x is more than 180 degrees.
D Angle x is between 90 and 180 degrees.
E Angle x is 180 degrees.

26

$105 \div \triangledown = 21$

What number does $\triangledown$ stand for?

A 4 **B** 5 **C** 6 **D** 7 **E** 15

27

A swimming pool charges £3.60 for entry.
You can save $\frac{1}{3}$ of the entry fee with a membership card.
On his first visit, Ken spends £5 on a membership card plus the reduced entry fee.

How many times does Ken visit before he gets back his £5?

A 4 **B** 2 **C** 5 **D** 1 **E** 3

28

A boy delivered newspapers.
He was paid £1.40 for every 100 papers he delivered.

How much was he paid for delivering 250 papers?

A £2.80 **B** £3.40 **C** £3.50 **D** £4.20 **E** £4.40

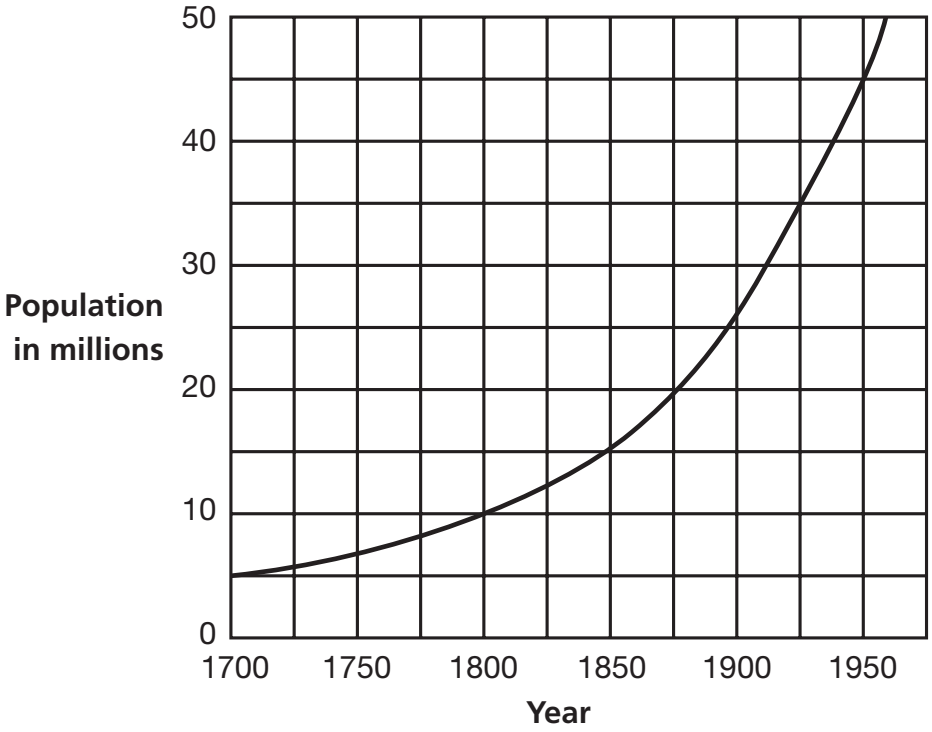
29

3.6 × 10 =

A 0.36 **B** 0.036 **C** 36 **D** 360 **E** 36.6

30

The graph shows the population of Britain from 1700.



In which year was the population twice as much as it was in 1800?

A 1850 **B** 1875 **C** 1895 **D** 1900 **E** 1910

31

A bag had 36 sweets in it.

Ethan took out $\frac{2}{3}$ of them.

How many sweets did he take out?

A 12 **B** 18 **C** 22 **D** 24 **E** 26

32

A ship travels 528 nautical miles in one day.

How many nautical miles does it travel in 15 days?

A 3168 **B** 3173 **C** 7920 **D** 7925 **E** 7950

33

9 36 81

The three numbers above are alike in some ways.

Select ONE of the following to say one way in which they are alike.

A They are all even numbers.
B They are all two-figure numbers.
C They are all prime numbers.
D They are all square numbers.
E They can all be divided exactly by 2.

34

Mateo's temperature is 37.5°C.
When he was ill it rose 3°C.

What was his temperature when he was ill?

A 37.8°C **B** 47.5°C **C** 34.5°C **D** 37.2°C **E** 40.5°C

35

Put these fractions in order of size, starting with the largest first.

$\frac{3}{4}$ $\frac{5}{8}$ $\frac{1}{2}$ $\frac{7}{8}$ $\frac{1}{4}$

A $\frac{7}{8}$ $\frac{3}{4}$ $\frac{5}{8}$ $\frac{1}{2}$ $\frac{1}{4}$

B $\frac{7}{8}$ $\frac{5}{8}$ $\frac{3}{4}$ $\frac{1}{2}$ $\frac{1}{4}$

C $\frac{3}{4}$ $\frac{7}{8}$ $\frac{5}{8}$ $\frac{1}{2}$ $\frac{1}{4}$

D $\frac{7}{8}$ $\frac{3}{4}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{1}{4}$

E $\frac{7}{8}$ $\frac{5}{8}$ $\frac{1}{2}$ $\frac{3}{4}$ $\frac{1}{4}$

36 Ava had 5 boxes.
Each box weighed 800 grams.

How many KILOGRAMS was this altogether?

A 4 kg **B** 4.5 kg **C** 40 kg **D** 4000 kg **E** 4500 kg

37 **What is 3^2 ?**

A 5 **B** 6 **C** 9 **D** 18 **E** 27

38 There were 27 children in a class.
There were twice as many boys as girls.

How many boys were there?

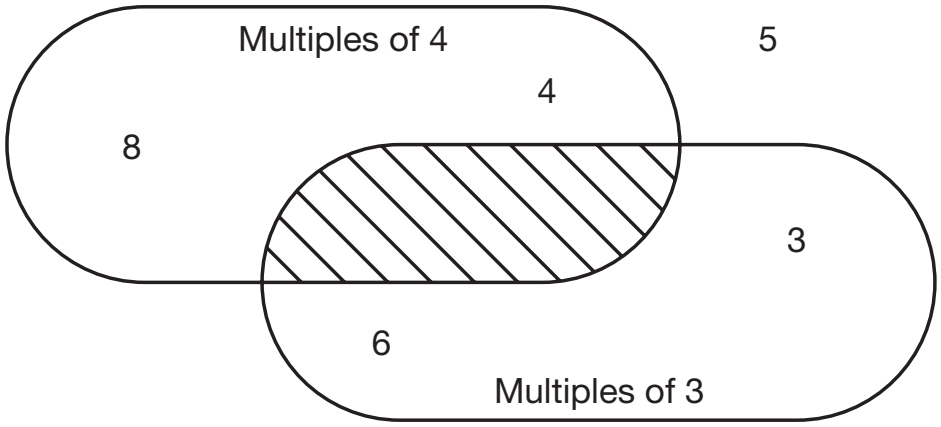
A 21 boys **B** 18 boys **C** 16 boys **D** 14 boys **E** 9 boys

39 **What is 60% of 50?**

A 5 **B** 25 **C** 27 **D** 27.5 **E** 30

40

Look at the diagram.



Which of the following numbers could go in the shaded section?

A 9 **B** 12 **C** 15 **D** 16 **E** 18

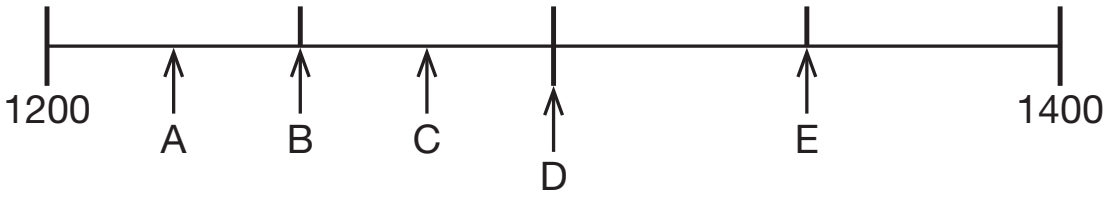
41

Work out XXVI multiplied by XLI.

A CMLXXXIV
B MLXVI
C DCCCLXXXIV
D MCDLXIV
E MDLXXXVI

42

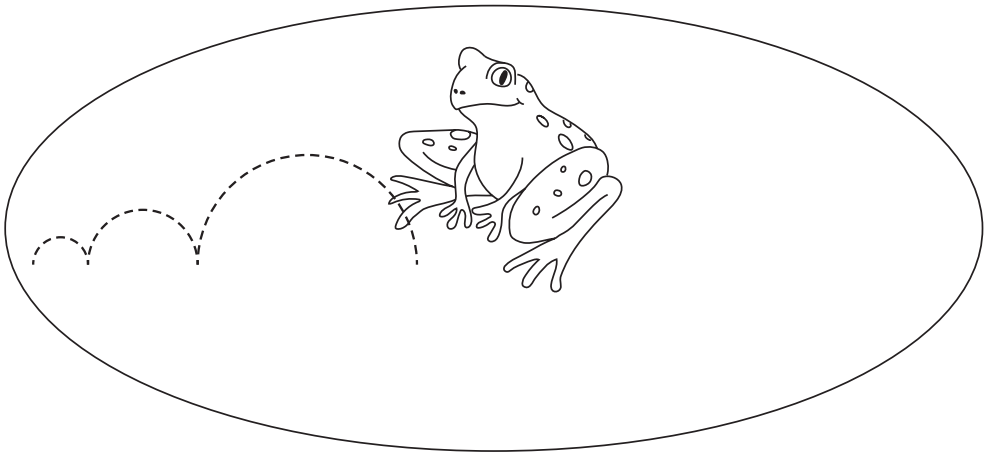
Which letter is pointing at 1250?



A A **B** B **C** C **D** D **E** E

43

A frog starts jumping from the middle of a circular pond.
The pond is 12 metres across, from one side to the other.



The frog always jumps half the distance left to the edge of the pond.

How far is the frog from the edge after 3 jumps?

A 10.5 m **B** 75 cm **C** 150 cm **D** 5.25 m **E** 125 cm

44

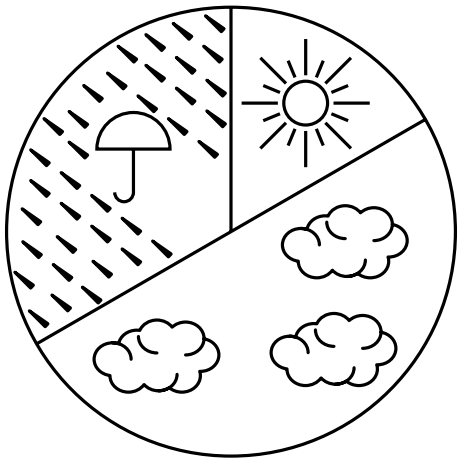
Zac starts with the number 5.

Which of these instructions does not give him an answer of 17?

A Halve your value, add six, then double.
B Multiply by four, then subtract three.
C Triple your value, then add two.
D Add three and double.
E Multiply by ten, subtract sixteen, then halve.

45

This chart shows the weather for 12 hours on one day.



How many hours was it dry?

A 2 hours **B** 4 hours **C** 6 hours **D** 8 hours **E** 10 hours

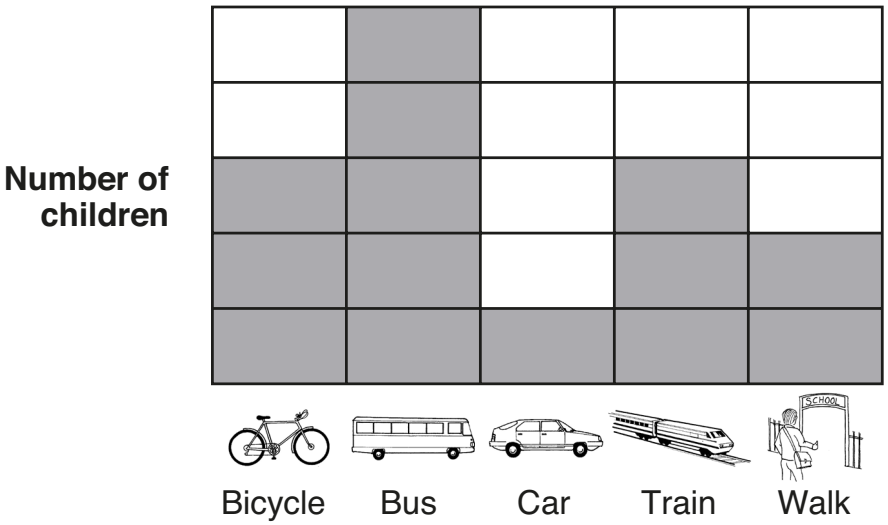
46

Put the correct number in the box

$27 \times 99 = 2700 - \square$

A 27 **B** 37 **C** 127 **D** 137 **E** 687

47 The chart shows the proportions of children in a class who go to school using various forms of transport.
There are no numbers along the y-axis but we know that there are 28 children in the class in total.

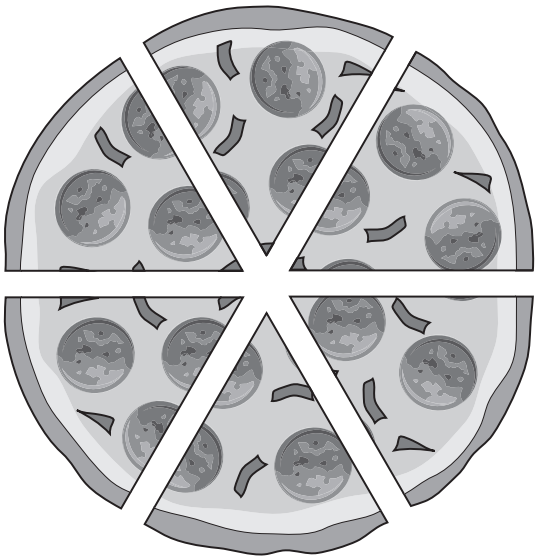


Which form of transport is taken by a total of 4 children?

A bicycle **B** bus **C** car **D** train **E** walk

48

Ali and his sister share a pizza cut into six equal pieces.



Ali eats $\frac{1}{3}$ of all the pieces. His sister eats $\frac{1}{4}$ of the remaining pieces.

After both Ali and his sister have eaten, what fraction of the pizza is left?

A $\frac{5}{12}$ **B** $\frac{1}{2}$ **C** $\frac{1}{4}$ **D** $\frac{1}{12}$ **E** $\frac{1}{6}$

49

Instructions for roasting meat:
Cook for 30 minutes at 230 °C.
Turn down the heat to 180 °C.
Allow 30 minutes cooking time for every 450 g.

A piece of meat takes $2\frac{1}{2}$ hours altogether to cook.

How heavy is it?

A 2.25 kg **B** 1.25 kg **C** 1.8 kg **D** 2.7 kg **E** 1.35 kg

50 To make brown paint, you mix 2 parts red, 17 parts yellow and 1 part blue.

How much red paint is needed to make 40 litres of brown paint?

A 20 litres
B 34 litres
C 1.5 litres
D 4 litres
E 2 litres

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FAMILIARISATION ANSWER SHEET - MATHEMATICS 2

GL Assessment

Candidate's Name

School Name

DATE OF TEST

Day		Month		Year	

CANDIDATE NUMBER

SCHOOL NUMBER

DATE OF BIRTH

Day		Month		Year	

Please mark boxes with a thin horizontal line like this ▬.

1
- 10 coins
- 18 coins
- 88 coins
- 108 coins
- 180 coins

2
- April
- December
- January
- July
- November

3
- 8605
- 6850
- 8650
- 6580
- 8560

4
- 14:00
- 04:00
- 05:00
- 4 pm
- 5 pm

5
- (1 , 2)
- (1 , 1)
- (2 , 0)
- (2 , 2)
- (2 , 1)

6
- 8250
- 80025
- 8205
- 8025
- 800025

7
- 80
- 60
- 65
- 40
- 70

8
- $\frac{1}{12}$
- $\frac{1}{5}$
- $\frac{1}{4}$
- $\frac{1}{6}$
- $\frac{1}{8}$

9
- 3 hundreds
- 3 ones
- 3 thousands
- 3 hundredths
- 3 tens

10
- 5
- 6
- 7
- 9
- 12

11
- 55
- 54
- 53
- 52
- 51

12
- 10 cm
- 40 cm
- 70 cm
- 910 cm
- 970 cm

13
- 3
- 4
- 5
- 6
- 7

14
- 31
- 14
- 23
- 13
- 41

15
- 27
- 21
- 25
- 23
- 29

16
- 17°C
- 16°C
- 15°C
- 14°C
- 13°C

17
- 44
- 54
- 56
- 58
- 64

18
- 8 times
- 14 times
- 4 times
- 3 times
- 40 times

19
- 16
- 17
- 9
- 8
- 18

20
- £22.05
- £21.05
- £20.05
- £12.05
- £11.05

21
- A
- B
- C
- D
- E

22
- £3.75
- £3.80
- £3.85
- £3.90
- £3.95

23
- 16
- 20
- 25
- 8
- 18

24
- A
- B
- C
- D
- E

25
- 4.15 pm
- 4.10 pm
- 4.05 pm
- 4.25 pm
- 4.20 pm

26
- 3 → 5
- 4 → 1
- 6 → 4
- 5 → 2
- 1 → 6

27
- 14 m
- 16 m
- 18 m
- 19 m
- 20 m

28
- £2340
- £8360
- £8580
- £9260
- £9360

29
- 8
- 7
- 6
- 5
- 4

30
- 350 g
- 750 g
- 850 g
- 950 g
- 9850 g

31
- Bath
- Mug
- Large saucepan
- Egg cup
- Bucket

32
- A
- B
- C
- D
- E

33
- 12
- 18
- 24
- 26
- 28

34
- (6 , 4)
- (4 , 2)
- (5 , 2)
- (4 , 3)
- (5 , 3)

35
- A
- B
- C
- D
- E

36
- 7.802
- 7.82
- 7.822
- 8.00
- 7.102

37
- 3 cm and 5 cm
- 3 cm and 6 cm
- 5 cm and 6 cm
- 5 cm and 8 cm
- 6 cm and 8 cm

38
- 8 hours 22 minutes
- 8 hours 42 minutes
- 8 hours 52 minutes
- 9 hours 42 minutes
- 9 hours 52 minutes

39
- 25 kg
- 2.50 kg
- 2.25 kg
- 0.25 kg
- 0.025 kg

40
- $42.50
- $47.50
- $45
- $42.05
- $27.20

41
- 1438 degrees
- 1086 degrees
- 186 degrees
- 1080 degrees
- 1806 degrees

42
- A
- B
- C
- D
- E

43
- (3 , 1) and (1 , 4)
- (2 , 6) and (4 , 3)
- (5 , 1) and (1 , 5)
- (2 , 5) and (4 , 2)
- (5 , 2) and (1 , 6)

44
- 0.24 cm²
- 2.4 cm²
- 24 cm²
- 240 cm²
- 2400 cm²

45
- $\frac{17}{10}$
- $\frac{1}{17}$
- $\frac{10}{17}$
- $\frac{17}{100}$
- $\frac{17}{11}$

46
- 9
- 8
- 7
- 6
- 5

47
- A
- B
- C
- D
- E

48
- A
- B
- C
- D
- E

49
- 44 metres
- 52 metres
- 64 metres
- 72 metres
- 74 metres

50
- $9 \times 8^2 \times 4$
- $3^2 \times 4^2 \times 4^2$
- $4^3 \times 6^2$
- $6 \times 12 \times 16$
- 36×64

END OF TEST

Mathematics 2

Familiarisation

Read the following with your child:

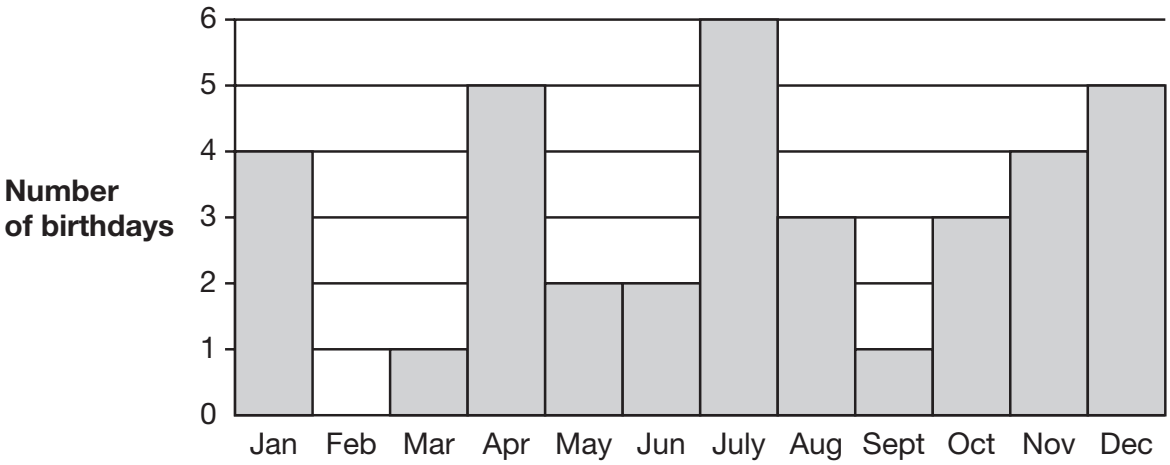
1. This is a multiple-choice paper, in which you have to mark your answer to each question on the separate answer sheet. You should mark only one answer for each question.
2. Draw a firm line clearly through the rectangle next to your answer like this . If you make a mistake, rub it out as completely as you can and put in your new answer.
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.**

GL Assessment

1 **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

2



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

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

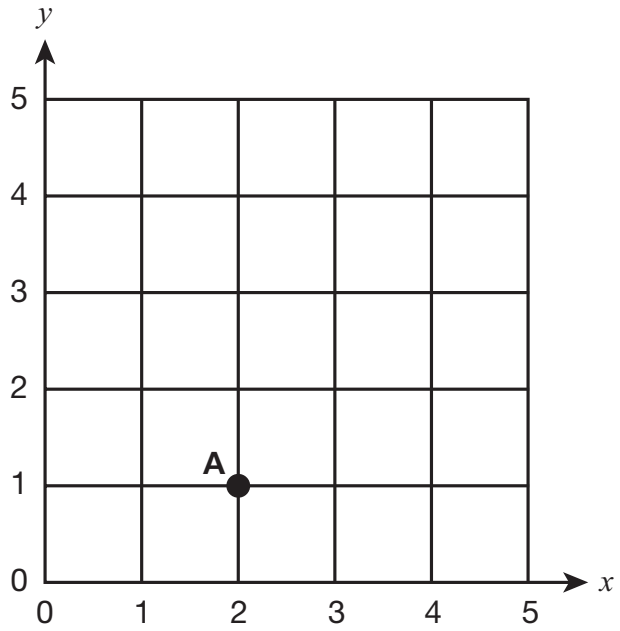
A 8605 **B** 6850 **C** 8650 **D** 6580 **E** 8560

4 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** 4 pm **E** 5 pm

5



What are the coordinates of A?

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

6

Write this number in figures:

eight thousand and twenty-five

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

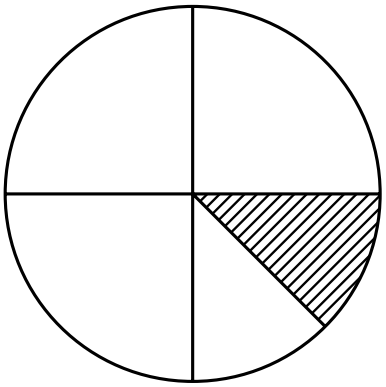
7

Share 240 into 4 equal parts.

How much is one part?

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

8



What fraction of this circle is shaded?

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

9

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

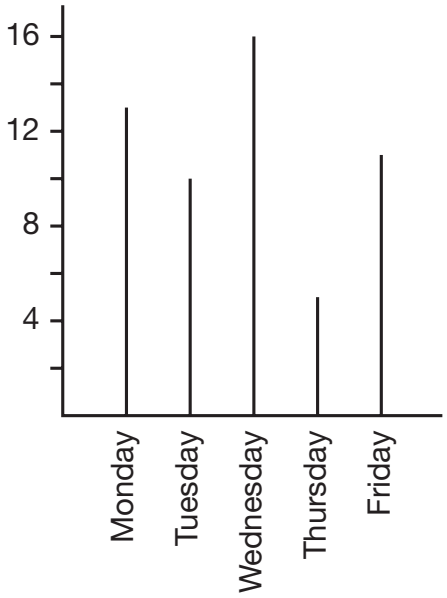
10

What number would go in the box?

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

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

11 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

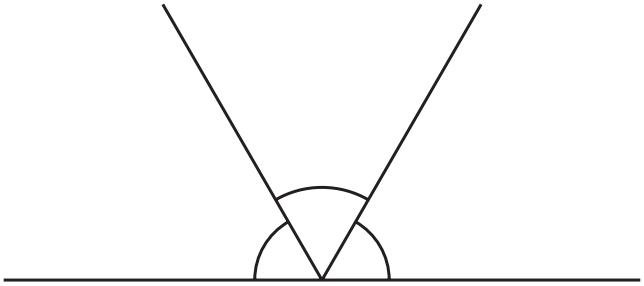
12 Three pieces of wood are cut from a plank 1 metre long.
Each piece is 30 cm long.

How long is the piece left over?

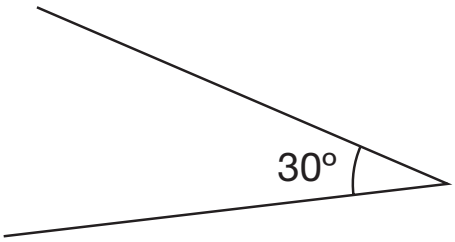
A 10 cm **B** 40 cm **C** 70 cm **D** 910 cm **E** 970 cm

13

These three angles fit together to make a straight line:



Look at the angle below.



How many of these 30° angles will fit together to make a straight line?

A 3 **B** 4 **C** 5 **D** 6 **E** 7

14

Callum is thinking of a two-digit number.
Its digits add up to 5.
It is a prime number.
Its square is a three-digit number.

What number is he thinking of?

A 31 **B** 14 **C** 23 **D** 13 **E** 41

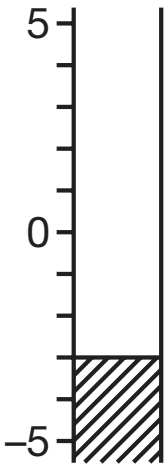
15

What is the next number in this sequence?

49 43 37 31 _____

A 27 **B** 21 **C** 25 **D** 23 **E** 29

16



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

What is the temperature in London?

A 17° C **B** 16° C **C** 15° C **D** 14° C **E** 13° C

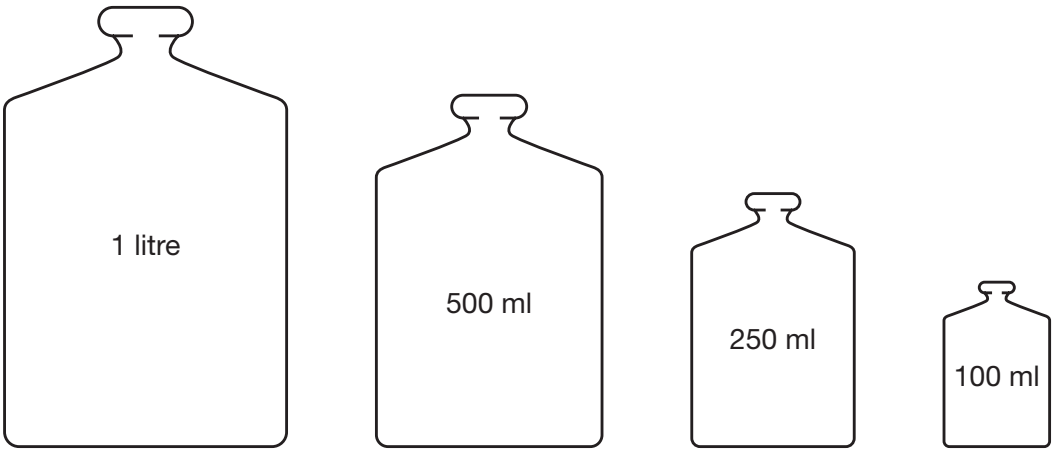
17

324 ÷ 6 =

A 44 **B** 54 **C** 56 **D** 58 **E** 64

18

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

Please go on to the next page >>>

21

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

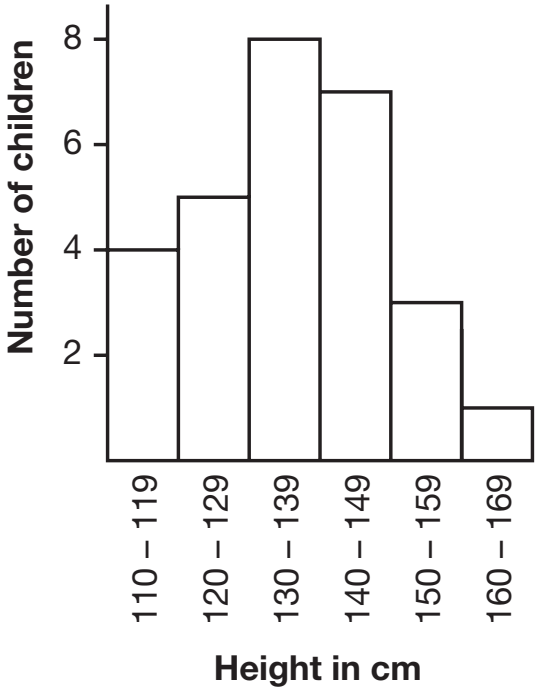
23

What is 50% of 40?

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

24

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

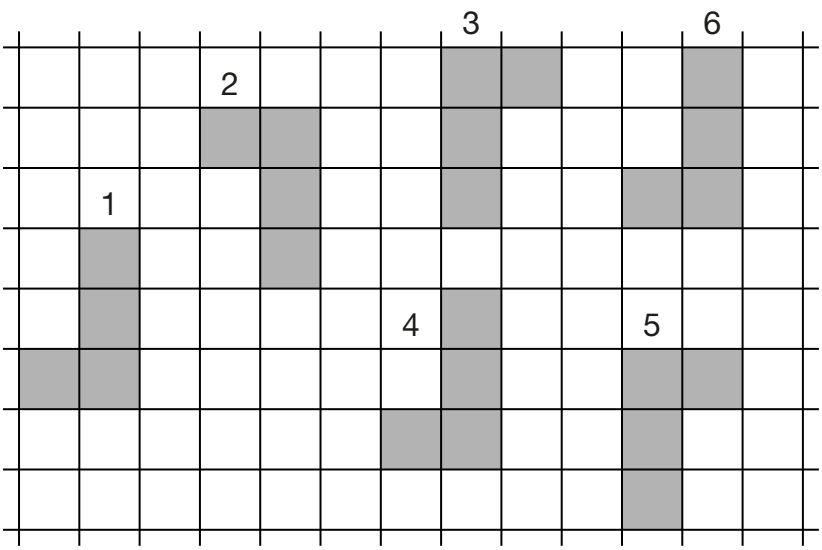
A television programme finished at 4.55 pm.
It lasted for three-quarters of an hour.

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

26

Which of these moves is not a translation?



A 3 → 5 **B** 4 → 1 **C** 6 → 4 **D** 5 → 2 **E** 1 → 6

27

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

28

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

29

Jenny is wallpapering her bedroom.
She starts with a 6 metre roll but has to cut off 1.75 metres because it is damaged.

If she needs 33.75 metres of wallpaper in total, how many more rolls of 6 metres must she buy?

A 8 **B** 7 **C** 6 **D** 5 **E** 4

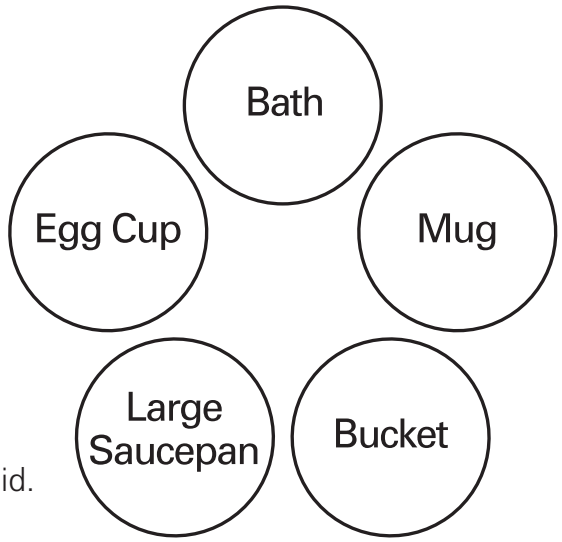
30

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



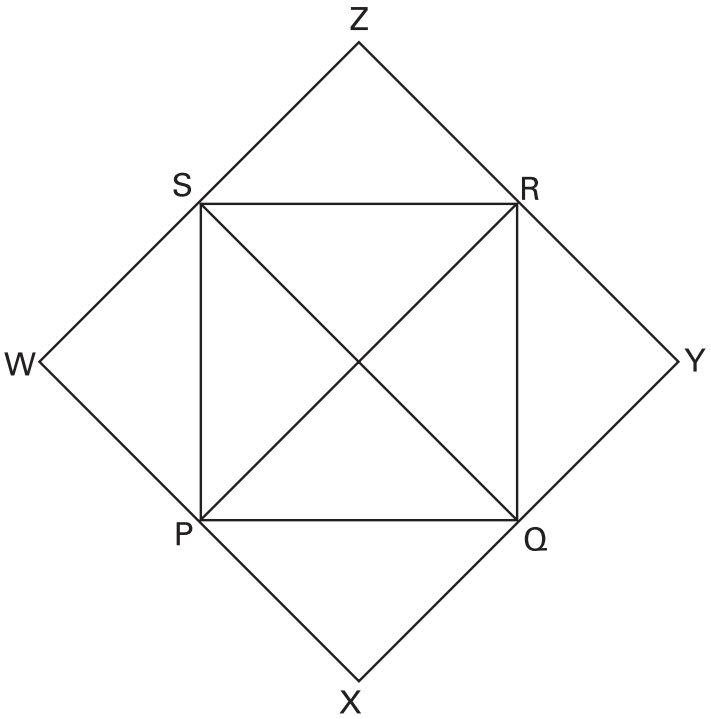
Mrs Shaw has 175 ml of liquid.
She needs a container for it.

Which one suits her needs best?

A Bath
B Mug
C Large saucepan
D Egg cup
E Bucket

32

The vertices of the two squares below are labelled with letters.



Which of the following lines is perpendicular to the line connecting P and R?

A the line connecting X and Y
B the line connecting P and S
C the line connecting Q and S
D the line connecting S and W
E the line connecting Q and R

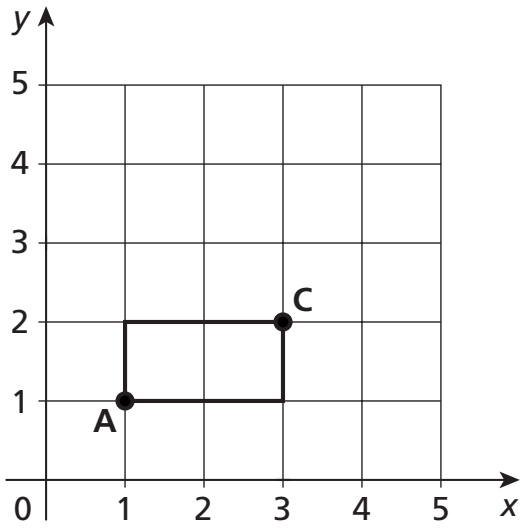
33

If X stands for a whole number and 3 lots of X are equal to 36, what are 2 lots of X equal to?

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

34

A rectangle is drawn with corner A at (1 , 1).
All sides of the rectangle are then doubled in length.

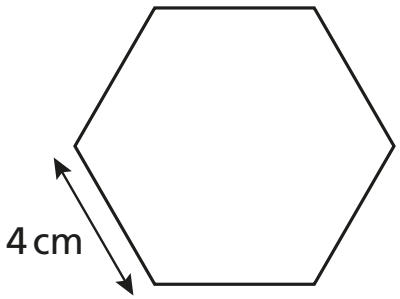


The new rectangle is drawn with A again at (1 , 1).

Where will corner C now be drawn?

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

35



Which of these statements is NOT true for this regular hexagon?

A There are 6 equal sides.
B There are 6 equal angles.
C The perimeter is 24 cm.
D There are 6 lines of symmetry.
E There is only 1 pair of parallel sides.

36

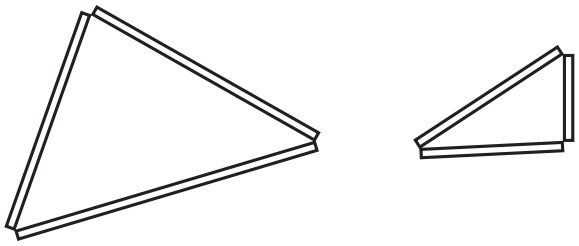
0.02 + 7.8 =

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

37

Emily has six sticks.
Their lengths are:
3 cm 5 cm 6 cm 8 cm 9 cm 11 cm

Emily can lay the sticks end to end to make triangles, like this:



Emily wants to make the smallest triangle she can using the 11 cm stick

Which two other lengths of stick should she use?

A 3 cm and 5 cm
B 3 cm and 6 cm
C 5 cm and 6 cm
D 5 cm and 8 cm
E 6 cm and 8 cm

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

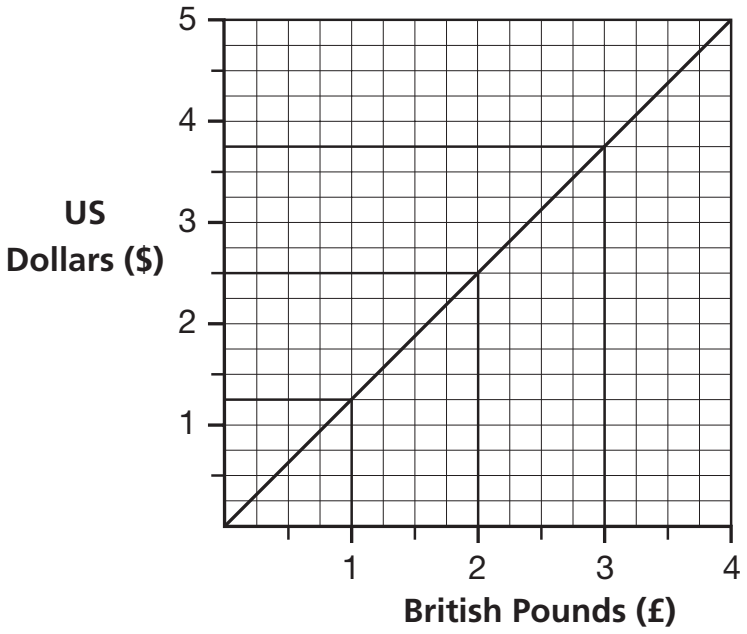
Liam carried ten parcels.
Each parcel weighed 250 grams.

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

40

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

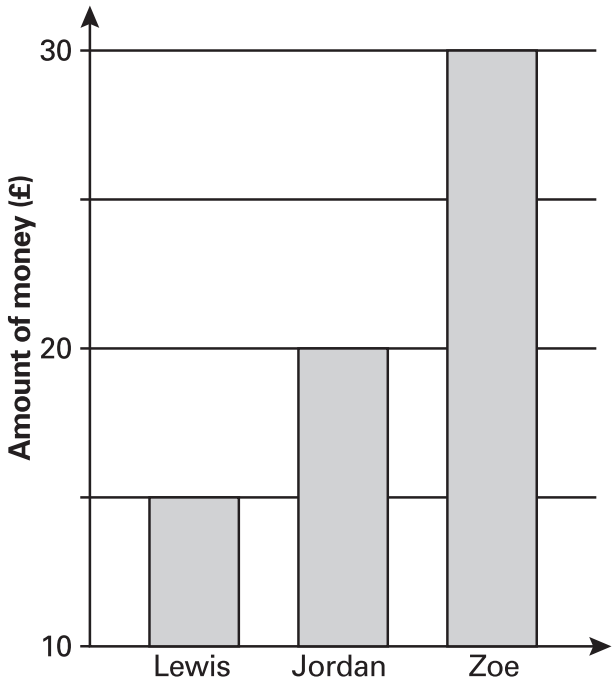
41

To add up all the angles inside a polygon, you subtract 2 from the number of sides and multiply this by 180.
An octagon has 8 sides.

What do the angles inside an octagon add up to?

A 1438 degrees
B 1086 degrees
C 186 degrees
D 1080 degrees
E 1806 degrees

42



The bar chart shows the amount of money Lewis, Jordan and Zoe have in their savings accounts.

Which one of these is NOT true?

A Lewis and Jordan have £35 altogether.
B Lewis has half as much as Jordan.
C The children have £65 altogether.
D Zoe has twice as much as Lewis.
E Jordan has £10 less than Zoe.

43

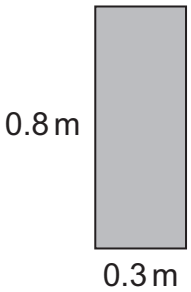
The end points of five lines are shown in the answer options below.

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

What is the area of this rectangle?



A 0.24 cm^2
B 2.4 cm^2
C 24 cm^2
D 240 cm^2
E 2400 cm^2

Please go on to the next page >>>

45

What is 1.7 as a fraction?

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

46

Greg thinks of a number, multiplies it by 3, subtracts 5 and then multiplies by 2. His answer is 26.

What number did Greg think of?

A 9 **B** 8 **C** 7 **D** 6 **E** 5

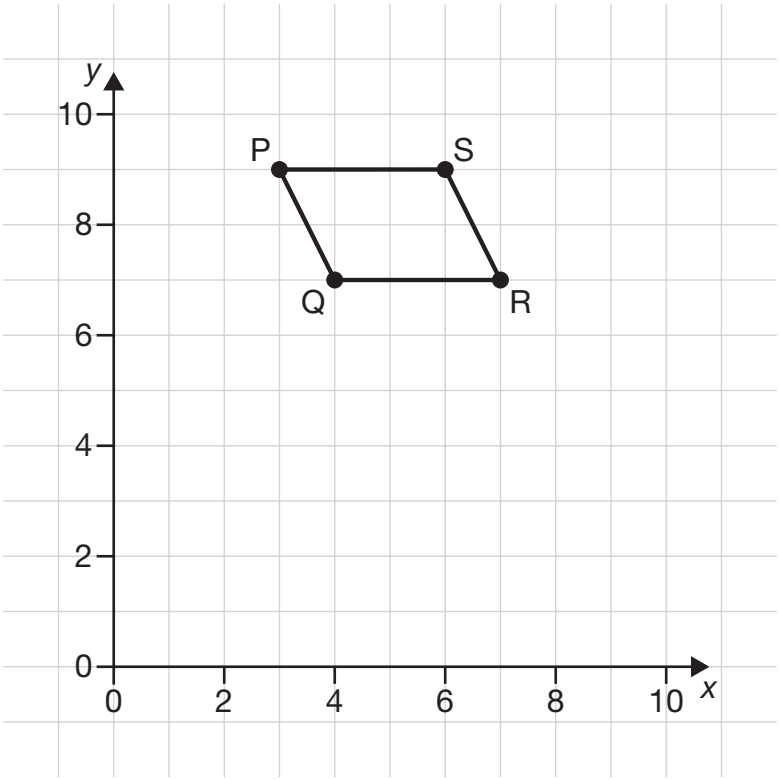
47

Henry says that to change from kilometres to miles you divide the number of kilometres by 8 and then multiply by 5.

Which of these is NOT correct?

A 168 kilometres is 105 miles.
B 248 kilometres is 155 miles.
C 192 kilometres is 125 miles.
D 216 kilometres is 135 miles.
E 264 kilometres is 165 miles.

48 A shape, PQRS is shown on a coordinate grid.



Following a reflection, the position of point S in the reflected shape is (6 , 1).

In what line is the shape reflected?

A A horizontal line that passes through the *y*-axis at (0 , 6)
B A vertical line that passes through the *x*-axis at (5 , 0)
C A horizontal line that passes through the *y*-axis at (0 , 5)
D A horizontal line that passes through the *y*-axis at (0 , 4)
E A vertical line that passes through the *x*-axis at (6 , 0)

49 The area of a rectangular playground is 210 metres squared.

Which of the following could be the playground's perimeter?

A 44 metres
B 52 metres
C 64 metres
D 72 metres
E 74 metres

50 **$4^3 \times 4 \times 3^2$ is NOT the same as which of the following?**

A $9 \times 8^2 \times 4$
B $3^2 \times 4^2 \times 4^2$
C $4^3 \times 6^2$
D $6 \times 12 \times 16$
E 36×64

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Mathematics
Parent's Guide

Familiarisation

GL Assessment

Contents

Mathematics

The real 11+ mathematics tests assess mathematics in line with the new National Curriculum and cover a variety of curriculum areas taught in schools up to the start of Year 6. The areas assessed typically include aspects of number, measurement, geometry and statistics. Some questions involve using current mathematical skills to solve new kinds of mathematical problems.

About the Familiarisation Papers

The Mathematics Familiarisation papers are designed to familiarise your child with the type of content in the real 11+ tests. The papers are presented in a very similar way to many of the test papers used for selection at 11+. They provide practice in answering different types of mathematical questions used in real 11+ tests and practice in recording answers on the separate answer sheet. The papers may not be exactly the same difficulty level as the real tests, as the difficulty level varies between schools.

Resources

Your child will need the following materials:

- **Mathematics Familiarisation 1 or 2 booklet**
- **Mathematics Familiarisation 1 or 2 answer sheet**
- **A pencil**: for the real 11+ tests, the answer sheets will need to be completed in pencil (not ink, felt-tip etc.) so they can be read by the computer.
- **A rubber** to change answers. Crossing out or placing an X next to the unintended answer on the answer sheet cannot be computer-marked.

Note: calculators must **not** be used (use of a calculator is **not** allowed in the real 11+ tests).

Working through the Papers

For the real 11+ tests, your child will need to: read the instructions on the front of the test paper; listen carefully to the instructions read out by the invigilator; observe the messages at the bottom of the test paper telling you to go on to the next page or stop; and check/fill in the details at the top of the separate answer sheet.

Give your child the paper at an appropriate time, when they are both physically and mentally alert. Choose a suitable area for them to work in – make sure they can work comfortably and are free from any distractions.

Before your child takes a familiarisation paper, discuss with them the reasons they are doing the paper. Also, explain that they might find some of the questions difficult but that they should work as quickly and as carefully as they can. If they get stuck on a question, they should not waste too much time on it but move on to the next one. Encourage your child to work through each question independently.

Your child should mark their answers on the separate answer sheet provided. The real 11+ test will be marked by a computer, but it is important for your child to learn how to use the answer sheet properly in preparation for the real test. They should mark their answer in the appropriate box by drawing a clear line through it with a pencil. Mistakes should be rubbed out carefully, **not** crossed out, since in the real test this would not be recorded correctly by the computer. You can ignore the boxes at the top of the answer sheet marked 'Candidate Number', 'School Number' and 'Date of Birth'. Your child will be required to fill in or check these details in the real test, but it is not necessary for familiarisation purposes.

Timing the Papers

The real 11+ tests are timed but, for familiarisation purposes, give your child as much time as they need to complete each paper. If you do wish to time your child, however, allow 50 minutes to complete the questions.

Marking and Feedback

The correct answers to the Mathematics Familiarisation Papers are provided on the following pages. Only these answers are allowed. One mark should be given for each correct answer – half marks should not be given. When you mark the papers you will be able to see how many questions your child got right overall. This will give you a good indication of their strengths and weaknesses. You may wish to go back over any questions your child got wrong and work through them together.

Answer Key

Mathematics Familiarisation 1

1. 5109
2. 6
3. 7 thousands
4. (1 , 6)
5. 366
6. 6
7. 1.45 m
8. $\frac{1}{3}$
9. 1
10. 19
11. 0.3 l
12. 7.5 hours
13. 8 weeks
14. 18
15. 19:15
16. 7
17. 55 mins
18. £46.50
19. 300 millilitres
20. A
21. 16 mins
22. 10%
23. 4 weeks
24. D
25. D
26. 5
27. 5
28. £3.50
29. 36
30. 1875
31. 24
32. 7920
33. D
34. 40.5°C
35. A
36. 4 kg
37. 9
38. 18 boys
39. 30
40. 12
41. MLXVI
42. B
43. 75 cm
44. D
45. 8 hours
46. 27
47. walk
48. $\frac{1}{2}$
49. 1.8 kg
50. 4 litres

Answer Key

Mathematics Familiarisation *2*

1. 18 coins
2. July
3. 8650
4. 04:00
5. (2 , 1)
6. 8025
7. 60
8. $\frac{1}{8}$
9. 3 tens
10. 6
11. 55
12. 10 cm
13. 6
14. 23
15. 25
16. 15°C
17. 54
18. 4 times
19. 8
20. £21.05
21. C
22. £3.90
23. 20
24. B
25. 4.10pm
26. 5 → 2
27. 18 m
28. £9360
29. 5
30. 850 g
31. Mug
32. C
33. 24
34. (5 , 3)
35. E
36. 7.82
37. 5 cm and 8 cm
38. 8 hours 52 minutes
39. 2.50 kg
40. $42.50
41. 1080 degrees
42. B
43. (5 , 2) and (1 , 6)
44. 2400 cm^2
45. $\frac{17}{10}$
46. 6
47. C
48. C
49. 74 metres
50. $6 \times 12 \times 16$

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