

Mathematics 1

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.**
-

Familiarisation

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

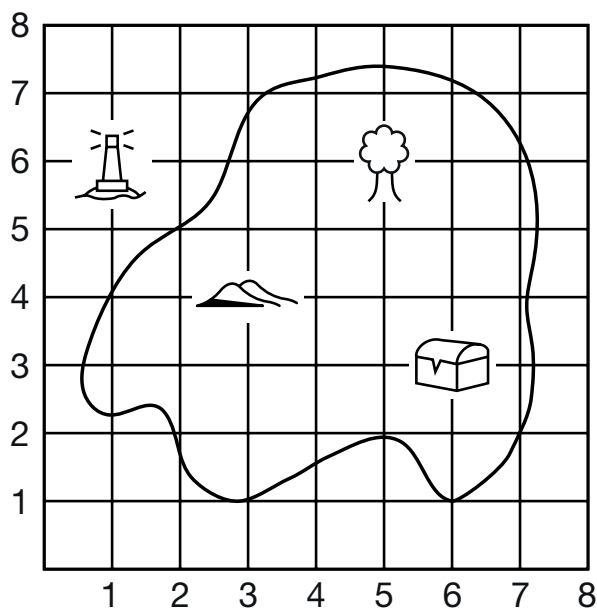
3

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



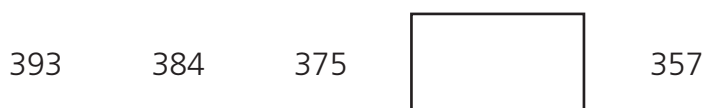
The hills are at (3 , 4).

The lighthouse is at (,).

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

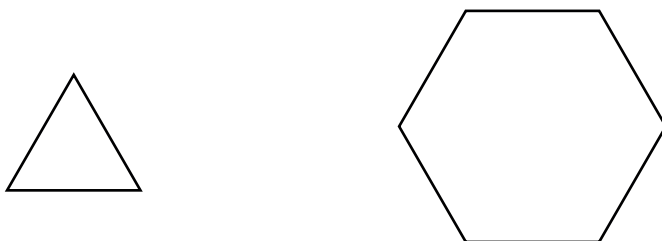
5

What is the missing number in this sequence?



- 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

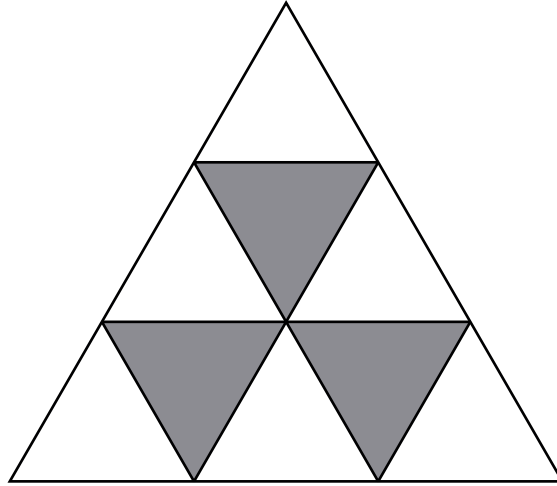
7

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.

$$123 \div \boxed{} = 123$$

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

10

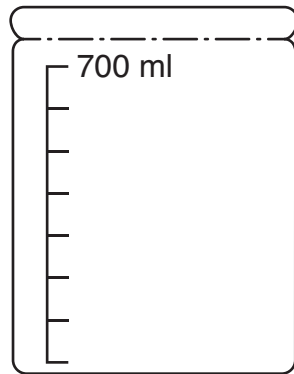
$$a - 9 = 10$$

$$a = ?$$

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

11

An empty jar = 700 millilitres



A jug holding 1 litre of water



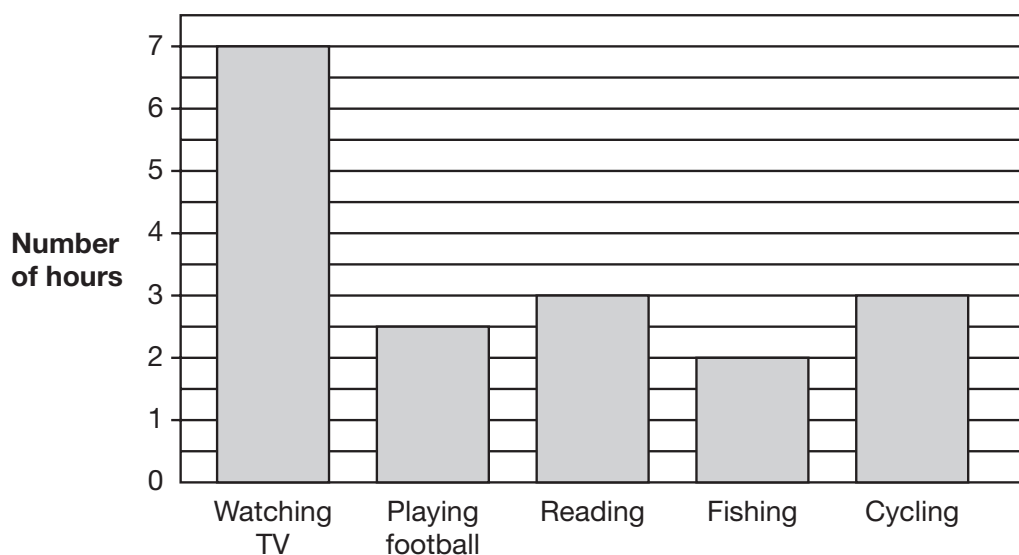
The jug holds 1 litre of water.
The jar is **filled** from the jug.

How much water will be left in the jug?

- A** 0.3 litres **B** 0.25 litres **C** 400 millilitres **D** 0.35 litres **E** 200 millilitres

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

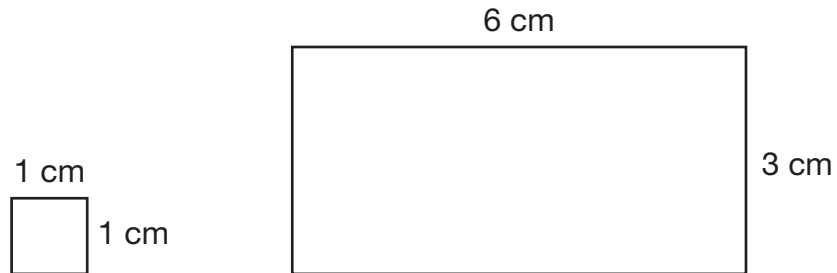
13

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

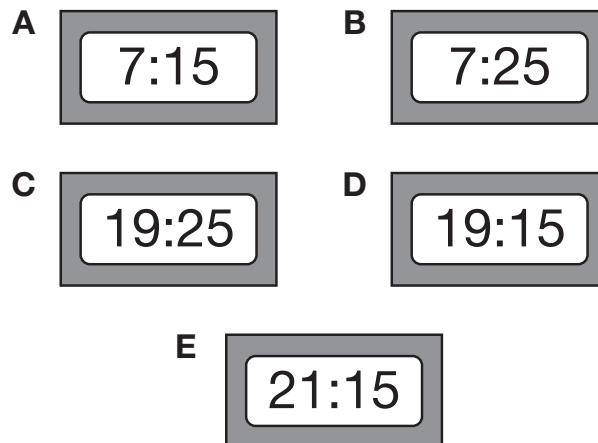


How many small squares will fit into the large rectangle?

- 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?

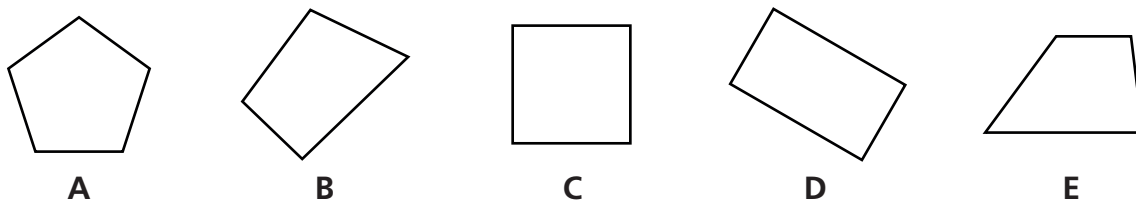
- A** £82.00 **B** £62.63 **C** £62.00 **D** £61.50 **E** £46.50

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



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

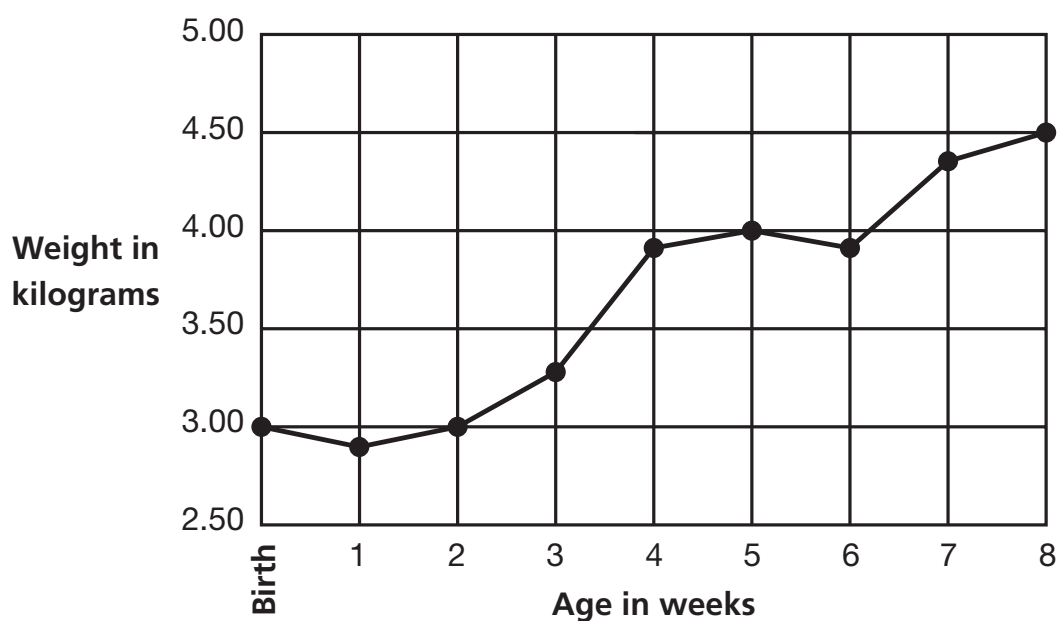
22

What percentage of £5 is 50p?

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

23

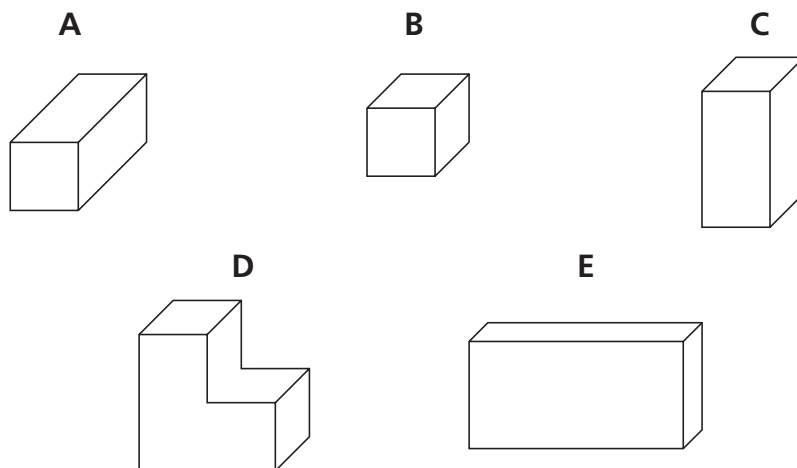
The graph shows the weight of a baby girl in the first 8 weeks of her life.



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

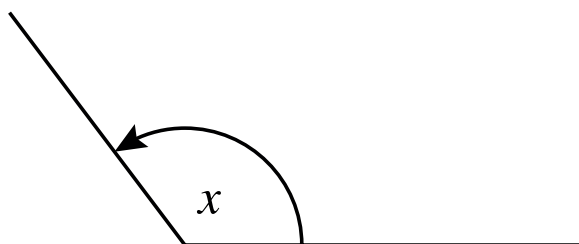


Which of these shapes is NOT a cuboid?

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

25

Look at this angle.



Which of the following statements is correct?

- 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

$$105 \div \nabla = 21$$

What number does ∇ 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

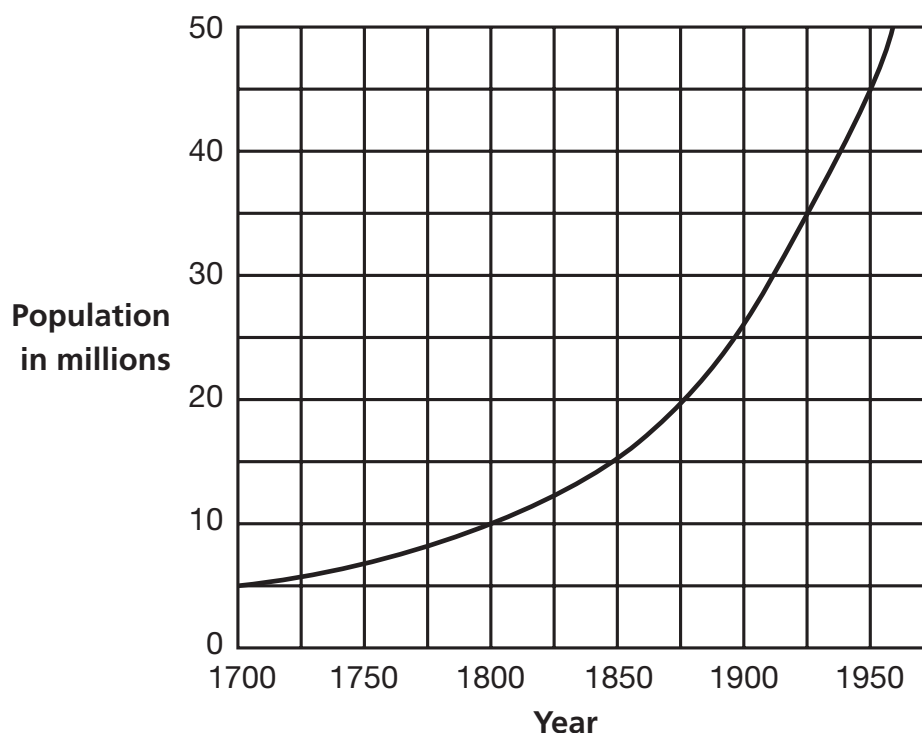
C 36

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 by 2 without a remainder.

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.

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

- 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
-

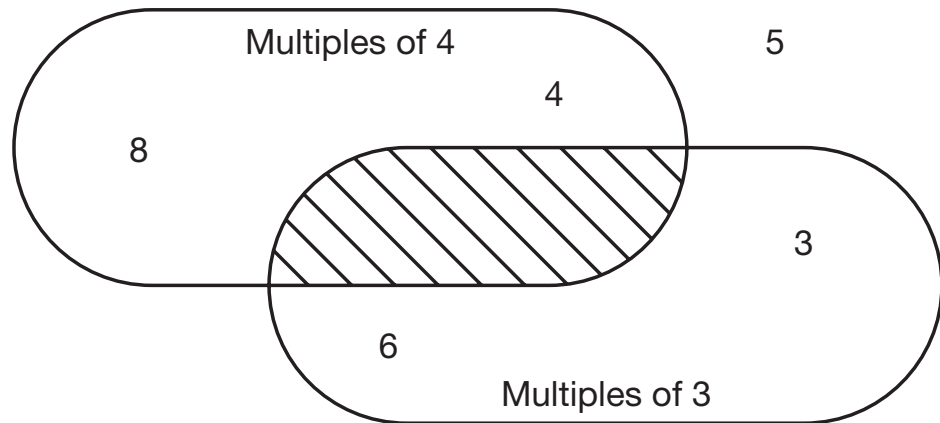
39

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

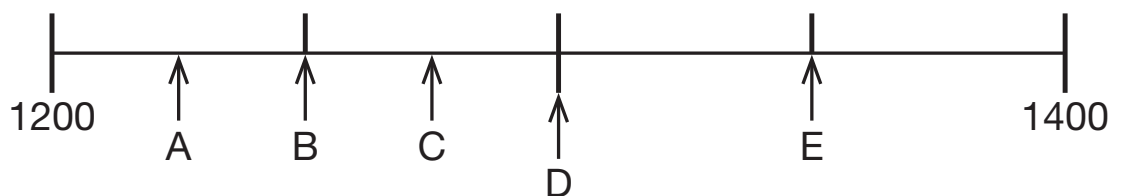
41

Work out XXVI multiplied by XLI.

- A CMLXXXIV
B MLXVI
C DCCCCLXXXIV
D MCDLXIV
E MDLXXXVI

42

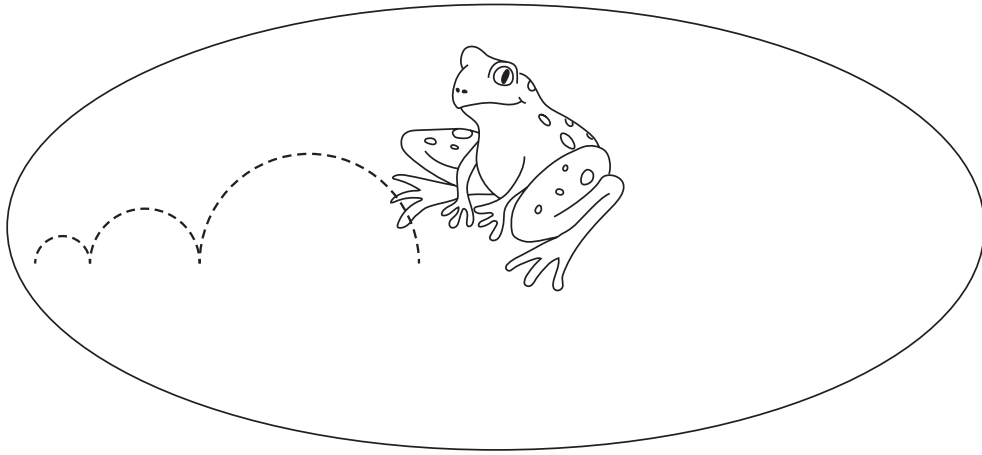
Which letter is pointing at 1250?



- 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 starts jumping towards the edge of the pond. Each jump is in the same direction.



Each jump halves his distance from 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

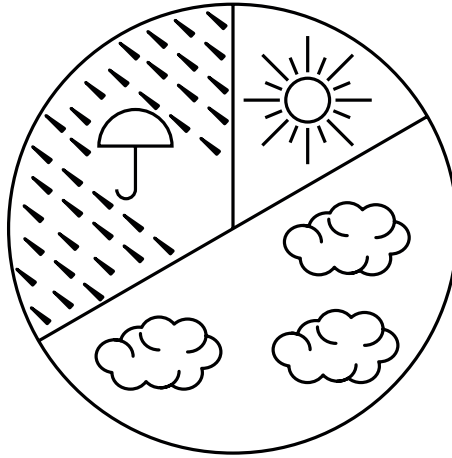
Zac starts with the number 5.

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

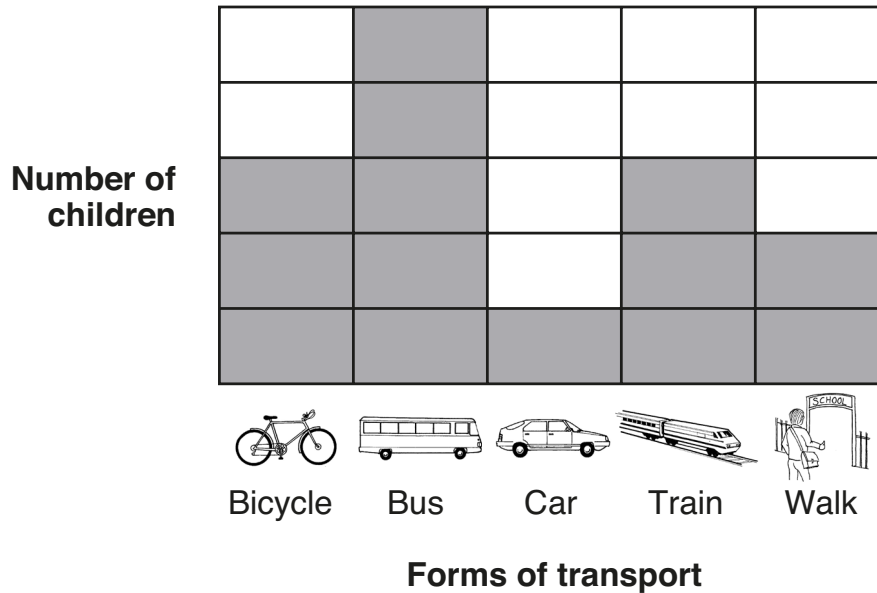
Put the correct number in the box

$$27 \times 99 = 2700 - \boxed{}$$

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

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.

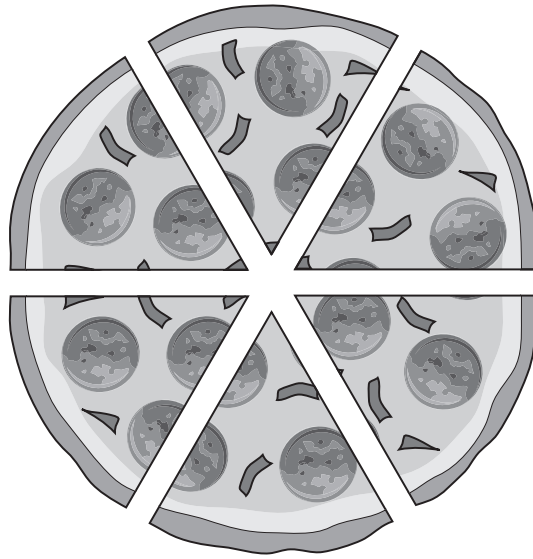


Which form of transport is taken by a total of 4 children?

- 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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