


## Practice Paper 2

# Mathematics

**Read the following carefully:**

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1. **Do not open or turn over the page in this booklet until you are told to do so.**
  2. This is a multiple-choice test 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. 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.
  4. Be sure to keep your place on the answer sheet. Mark your answer in the box that has the same number as the question.
  5. You may not be able to finish all the questions, but try to do as many as you can. 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.
  6. You may do any rough working on a separate sheet of paper.
  7. **Work as quickly and as carefully as you can.**
  8. You will have **50 minutes** to do the test.
-

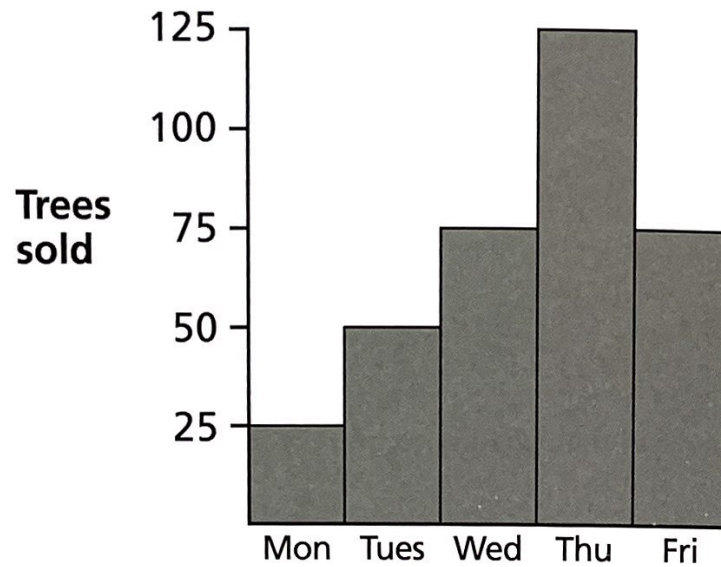
1

Which value does the 9 in 12 097 represent?

- A 9000      B 9      C 900      D 90 000      E 90

2

The graph below shows the number of Christmas trees sold on five days at Willow Farm.



How many more trees were sold on Thursday than on Tuesday?

- A 25      B 50      C 75      D 100      E 125

3

In a class of 32 children, three-quarters of them like painting.

How many children do NOT like painting?

- A 8      B 6      C 4      D 9      E 12

4

Jack collected the following data during a survey of his year group.

	Favourite Message System		
	Telephone	Text	Email
Boys	10	6	28
Girls	14	?	28

100 pupils completed the survey.

**How many girls gave text as their favourite way of sending messages?**

- A 36      B 14      C 10      D 24      E 4
- 

5

Mrs Patel spent £11.60 on 40 busy lizzie plants.

**What was the cost of each plant?**

- A 76p      B 29p      C 40p      D £2.90      E 2.9p
- 

6

A rope is 4 m 6 cm long. It is cut into two equal pieces.

**How long is each piece?**

- A 2.06 m      B 2.30 m      C 2.46 m      D 0.23 m      E 2.03 m
- 

7

Look at this table showing the performance of the school hockey team.

Year	Won	Lost	Drawn
2014	7	6	4
2015	3	7	2
2016	8	4	5

**How many matches in total did the team NOT win?**

- A 18      B 17      C 11      D 29      E 28

8

Which of these words has a vertical line of symmetry?

DID  
DAB  
HAD  
MUM  
MUD

- A DID      B DAB      C HAD      D MUM      E MUD

9

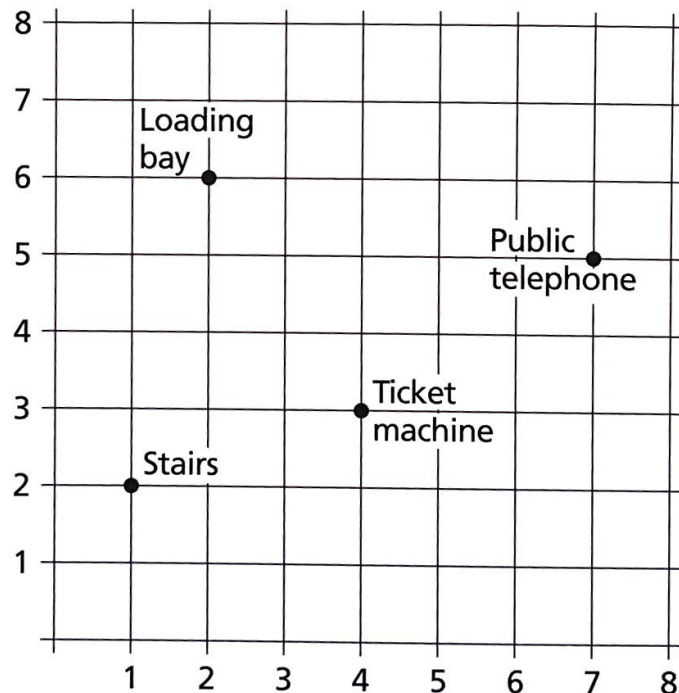
Year 6 are all going on a day trip to France.  
There are 33 children in Year 6 and the trip costs £25 each.

How much money must be collected in total from the children?

- A £58      B £82.50      C £150      D £580      E £825

10

This grid shows a car park.



Where is the ticket machine?

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

11

Our school magazine has 56 pages.  
 $\frac{2}{7}$  of the pages contain typing errors.

**How many pages contain typing errors?**

- A 14                  B 9                  C 16                  D 27                  E 15
- 

12

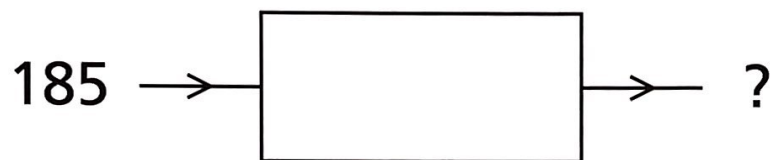
A rectangle has an area of  $54 \text{ cm}^2$ .

**If two of the sides are each 6 cm long, what is the length of each of the other two sides?**

- A 6 cm                  B 5.4 cm                  C 9 cm                  D 5 cm                  E 8 cm
- 

13

This machine divides by 5 and then multiplies by 3.



**Which number comes out?**

- A 29                  B 37                  C 111                  D 85                  E 115
-

14

Look at the grid in which there are some empty squares.

	15		→ 31
	?	16	→ 31
9		9	→ 31

↓   ↓   ↓

31   31   31

When every square is filled in, each row and each column adds up to 31.

**Which number should be in the square with the question mark?**

- A 13      B 6      C 12      D 3      E 10

15

What is this number rounded to the nearest tenth:

6.52

- A 6.5      B 6.6      C 6.52      D 6.53      E 6.2

16

A medium-sized teapot holds just enough for four cups of tea.

**Which of these is most likely to be the volume of the teapot?**

- A 2 litres      B 0.3 litres      C 300 ml      D 4 litres      E 800 ml

17

In five years' time, Peter's cat will be 12 years old.

**How old was his cat 6 years ago?**

- A 13      B 23      C 7      D 5      E 1

18

Sanjay let me finish his box of mints.  
He had eaten  $\frac{5}{8}$  of them.

**If 36 mints were left for me, how many had Sanjay eaten?**

- A 60                  B 58                  C 68                  D 36                  E 56
- 

19

Two coaches are booked for the school trip.  
The first coach seats 56 passengers, and the second 43.  
8 adults, 41 boys and 38 girls are going on the trip.

**How many spare seats will there be?**

- A 11                  B 48                  C 35                  D 12                  E 20
- 

20

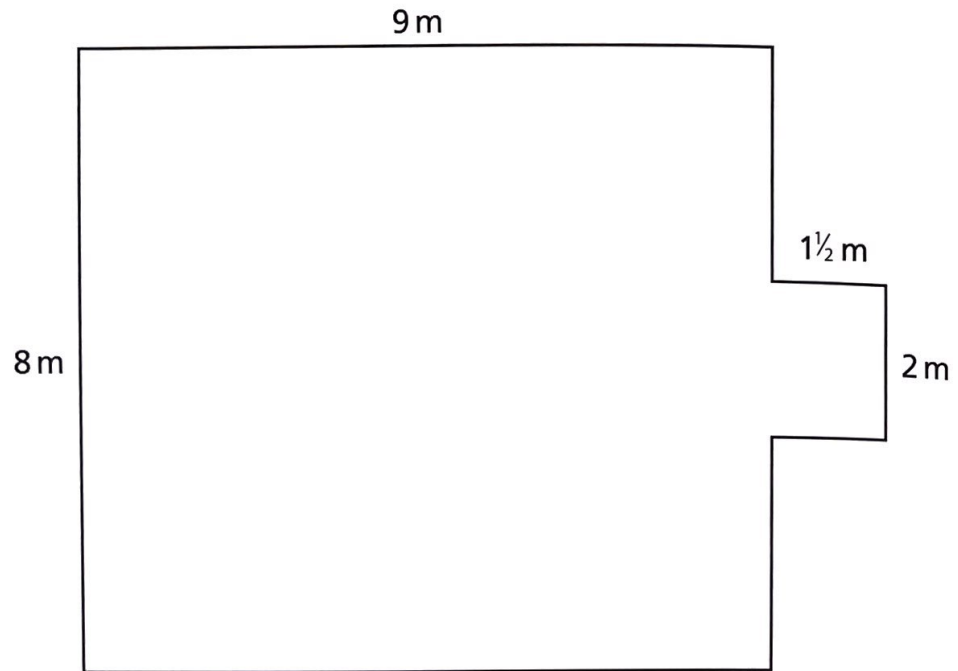
John and his sister Debra held a cake sale at their school to raise money for charity.  
They sold 48 large cakes at 10p each and 65 small cakes at 5p each.

**How much money did they make at their sale?**

- A £8.05                  B £37.30                  C £11.30                  D £5.65                  E £80.50
-

21

Here is the plan of a room.

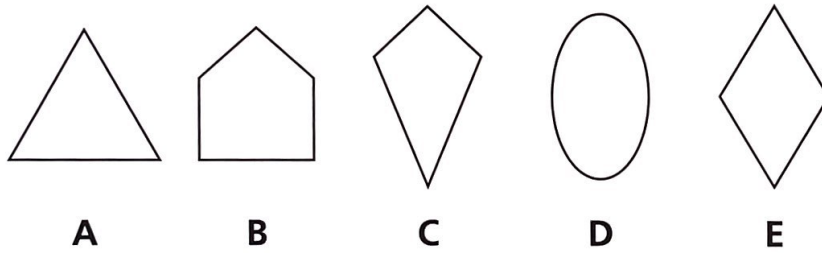


How far is it all round the edge of this room?

- A 37m      B 72m      C 75m      D 41m      E 33m

22

Which shape has more than two lines of symmetry?



- A A      B B      C C      D D      E E

23

Which of these numbers is exactly divisible by 2 and 8?

- A 18      B 28      C 32      D 42      E 52



24

The Crystal 5 cinema charges £3.50 entrance for adults and £3 for children. Popcorn is £1.50 for a large bag and £1.25 for a small bag.

**What is the total cost for Mr and Mrs Jenkins to take their two children to the cinema if each adult has a large bag of popcorn and each child has a small bag?**

- A £12.50      B £16.25      C £9.25      D £18.50      E £15.00
- 

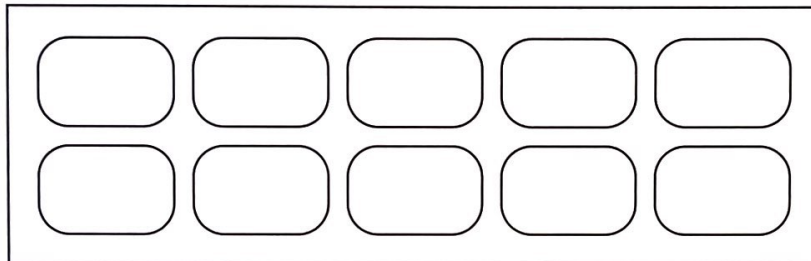
25

You multiply a number by 3.  
The answer is doubled, then divided by 6.  
The result is 5.

**What number did you start with?**

- A 5      B 6      C 3      D 30      E 15
- 

26



Kim uses 6 ice cubes in drinks for her friends.

**What percentage of the ice cubes is left?**

- A 60%      B 50%      C 40%      D 30%      E 20%
-

27

Mr Sohal is looking at the effect of temperature. He repeats the same experiment several times. Each time, the temperature is  $4^{\circ}\text{C}$  cooler than the previous time. He did the first experiment at  $25^{\circ}\text{C}$ .

**At what temperature did he carry out his eighth experiment?**

- A  $-3^{\circ}\text{C}$       B  $0^{\circ}\text{C}$       C  $-7^{\circ}\text{C}$       D  $1^{\circ}\text{C}$       E  $-5^{\circ}\text{C}$
- 

28

Sarah's mum buys her a new school skirt in a sale at half price. The original cost of the skirt was  $\pounds 9.50$ .

**How much change does Sarah's mum get from her  $\pounds 10$  note?**

- A 25p      B 50p      C  $\pounds 4.50$       D  $\pounds 4.75$       E  $\pounds 5.25$
- 

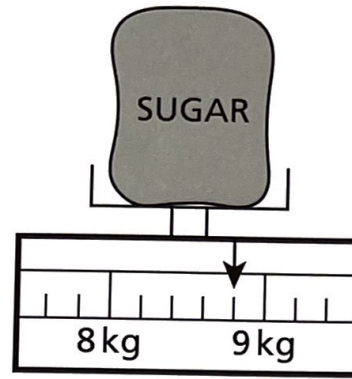
29

Five parking spaces are being marked out along the roadside. An average car is 4 m long.

**Allowing an extra 1.5 m per car for driving into the space, roughly how long should the spaces be altogether?**

- A 0.25 km      B 28 m      C 35 m      D 25 m      E 0.20 km
-

30



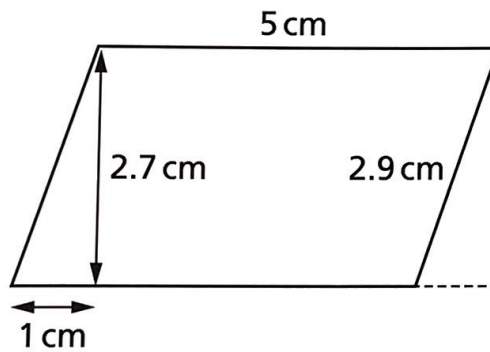
The arrow shows how much the sack of sugar weighs.

**If another 600 g of sugar are added, what will the total weight be?**

- A** 9.4 kg      **B** 9.0 kg      **C** 9.2 kg      **D** 9.6 kg      **E** 8.6 kg

31

Jasmina is trying to calculate the area of this shape. She has spotted that she can make it into a rectangle and has drawn this onto her diagram.

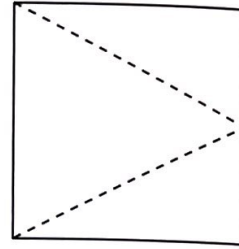


**Calculate the area of this shape.**

- A**  $15 \text{ cm}^2$       **B**  $13.5 \text{ cm}^2$       **C**  $12.05 \text{ cm}^2$       **D**  $17.7 \text{ cm}^2$       **E**  $16 \text{ cm}^2$

32

Jamal has a square card.  
He marks the middle of one side.  
He cuts off the small triangles shown.



**What type of triangle is Jamal left with?**

- A equilateral    B right-angled    C scalene    D obtuse-angled    E isosceles

33

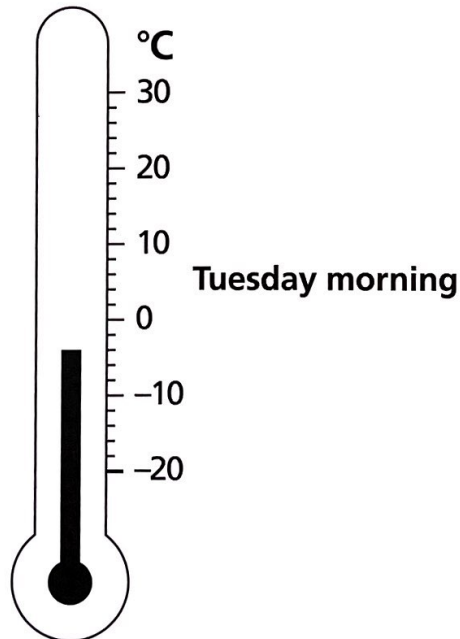
At Sally's school, there are 860 children.  
95% like chips.

**How many children don't like chips?**

- A 43    B 95    C 765    D 817    E 5

34

Class 5 are recording the outside temperature every morning and afternoon.  
On Tuesday morning, Nina read the temperature.

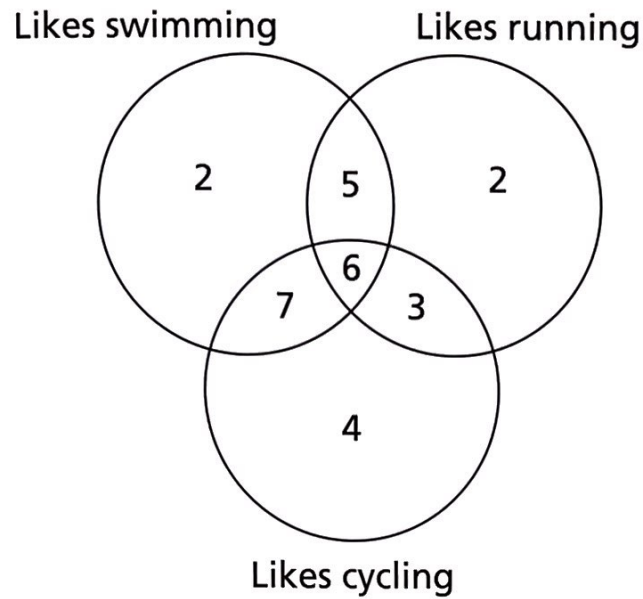


During the day, the temperature rose 7°C.

**What was the temperature in the afternoon?**

- A 7°C    B 10°C    C 5°C    D 3°C    E 8°C

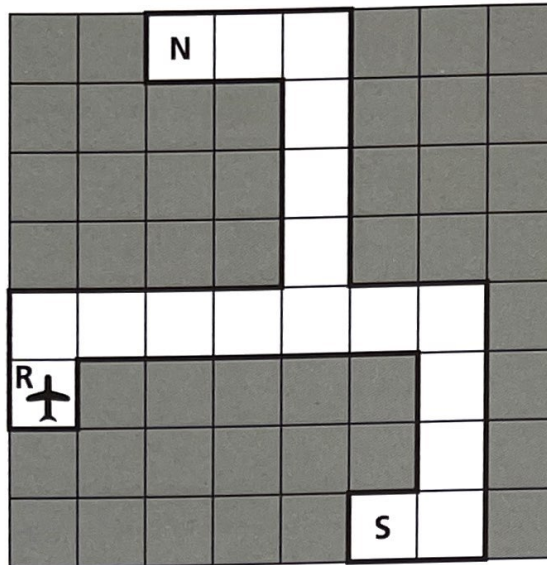
29 children were asked whether they like swimming, running and cycling. Their answers are shown in this diagram:



How many children like both running and cycling, but NOT swimming?

- A 7                      B 3                      C 6                      D 5                      E 4

36



At the airport, Ground Control must guide a plane from the end of the runway, point R, to the North terminal, point N.

The plane can only move FORWARD, TURN LEFT 90° or TURN RIGHT 90°.

**Which set of instructions will guide the plane from the runway (R) to the North terminal (N)?**

- A FORWARD 1, TURN RIGHT 90°, FORWARD 6, TURN RIGHT 90°, FORWARD 3, TURN RIGHT 90°, FORWARD 1.
- B FORWARD 1, TURN RIGHT 90°, FORWARD 4, TURN LEFT 90°, FORWARD 4, TURN LEFT 90°, FORWARD 2.
- C FORWARD 1, TURN LEFT 90°, FORWARD 4, TURN LEFT 90°, FORWARD 4, TURN RIGHT 90°, FORWARD 2.
- D FORWARD 1, TURN RIGHT 90°, FORWARD 6, TURN LEFT 90°, FORWARD 3, TURN RIGHT 90°, FORWARD 1.
- E FORWARD 1, TURN RIGHT 90°, FORWARD 4, TURN RIGHT 90°, FORWARD 4, TURN LEFT 90°, FORWARD 2.

37

The school clock is put right on Monday at 11.00 a.m.

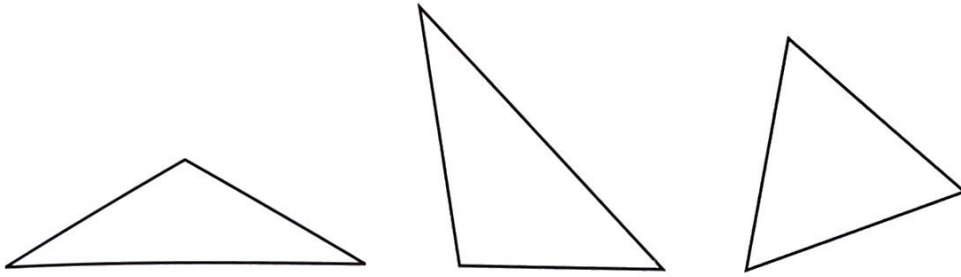
At 11.00 a.m. on Tuesday it gives the time as 11.02 a.m.

**How much time does the clock gain every hour?**

- A 1 minute    B 15 seconds    C 5 seconds    D 2 minutes    E 10 seconds

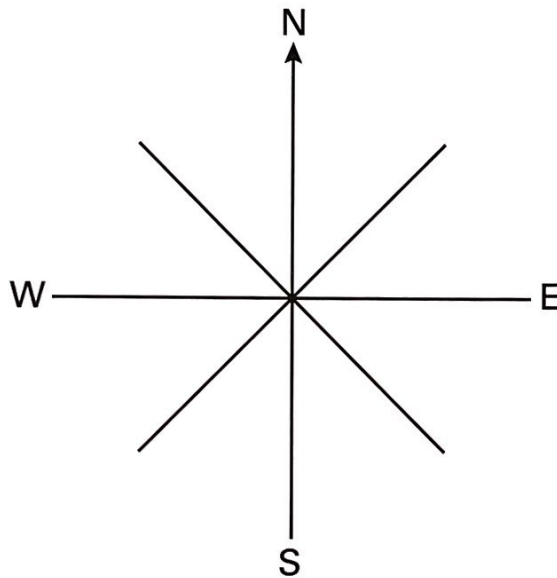
38

Which answer describes the three triangles below in order from left to right?



- A scalene, isosceles, equilateral
- B isosceles, scalene, equilateral
- C equilateral, scalene, isosceles
- D scalene, equilateral, isosceles
- E equilateral, isosceles, scalene

39

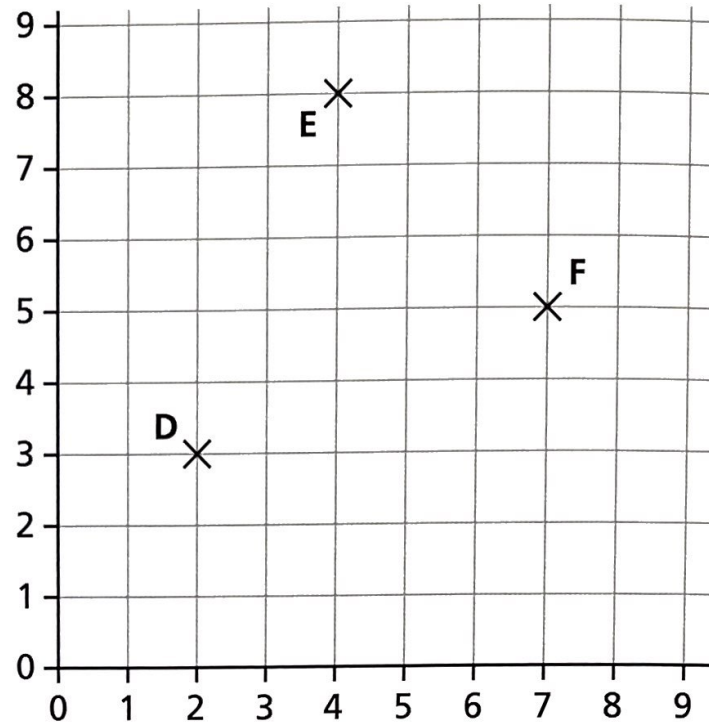


Anita is facing NW.  
She then turns anti-clockwise through  $585^\circ$ .

Which direction does she now face?

- A E
- B N
- C NE
- D SE
- E S

40



What are the coordinates of D, E and F?

- A D (3 , 2) E (8 , 4) F (5 , 7)
- B D (2 , 3) E (4 , 8) F (7 , 5)
- C D (2 , 3) E (4 , 7) F (7 , 5)
- D D (3 , 2) E (7 , 5) F (4 , 8)
- E D (3 , 2) E (4 , 8) F (5 , 7)

41

Which one of these gives the answer 30?

- A 25% of 80
- B  $\frac{2}{5}$  of 75
- C  $\frac{3}{4}$  of 45
- D 70% of 40
- E 40% of 60



42

Lollipops cost the same as sherbet dips.  
Sherbet dips cost twice as much as jelly rings.  
Four of the following cost the same.

**Which does not cost the same as the rest?**

- A 3 sherbet dips, 2 jelly rings, 1 lollipop
- B 2 lollipops, 2 sherbet dips, 2 jelly rings
- C 3 sherbet dips, 2 lollipops
- D 2 lollipops, 4 jelly rings, 2 sherbet dips
- E 1 lollipop, 6 jelly rings, 1 sherbet dip

43

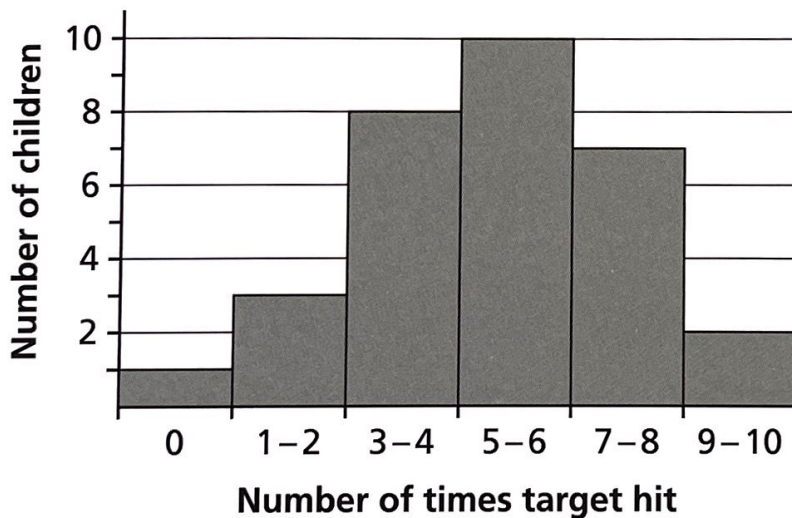
Rajiv draws a quadrilateral with only one pair of equal angles and only one line of reflective symmetry.

**What is the name of this quadrilateral?**

- A square      B rectangle      C kite      D rhombus      E trapezium

44

This bar chart shows how many times a class of children hit a target with a set of ten beanbags.



**How many children hit the target fewer than 7 times?**

- A 22      B 29      C 12      D 21      E 10

45

Which one of these is closest to  $888.88 + 88.88 + 8.88 + 0.88$ ?

- A 975      B 1000      C 998      D 990      E 968
- 

46

On day 1, 4 people are sent an email.  
On day 2, each of the 4 send it to 4 more people, and so on.  
Each person sends the email just once.

How many people have received the email by day 4?

- A 64      B 256      C 84      D 340      E 240
- 

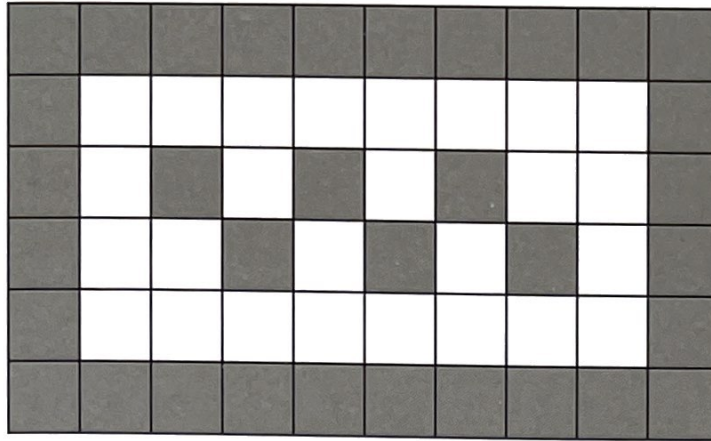
47

An isosceles triangle has angles X, Y and Z.  
Angle X is  $55^\circ$ .  
Angles X and Y differ by  $15^\circ$ .

What is the value of angle Z?

- A  $15^\circ$       B  $40^\circ$       C  $55^\circ$       D  $70^\circ$       E  $80^\circ$
-

48

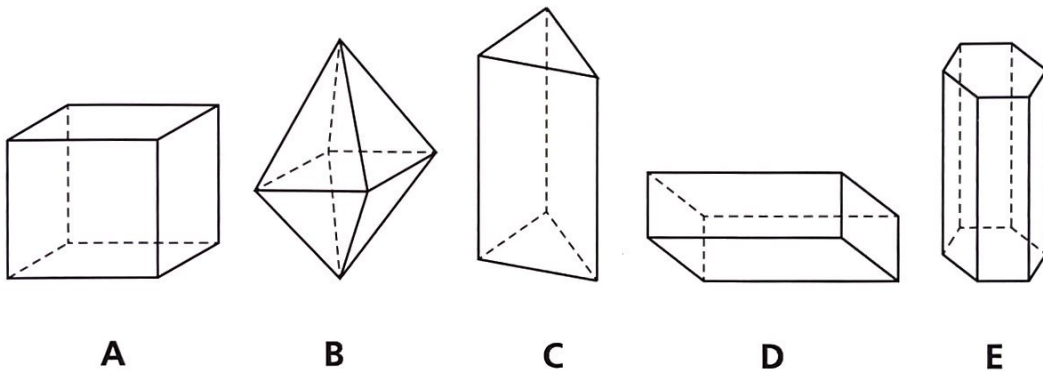


Each of these grey and white carpet tiles measures  $50\text{ cm} \times 50\text{ cm}$ .

**What is the total area covered by the grey carpet tiles, in square metres?**

- A**  $60\text{ m}^2$       **B**  $30\text{ m}^2$       **C**  $34\text{ m}^2$       **D**  $17\text{ m}^2$       **E**  $8.5\text{ m}^2$

49



**Which of the above solids has more faces than vertices?**

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

50

Amul divided a whole number less than 200 by a whole number greater than 15. The result was a whole number.

**What is the largest possible result of Amul's division?**

- A** 13      **B** 12      **C** 14      **D** 11      **E** 15