


## Practice Paper 7

# Mathematics

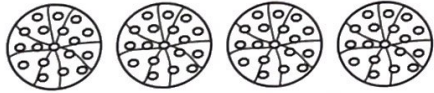
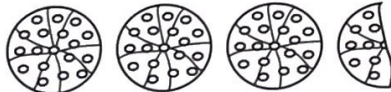
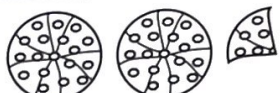
Read the following carefully:


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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

The pictogram below shows the number of children who liked three different types of pizza.

Pizza	Number of children
Tomato	
Chicken	
Vegetable	

 = 8 children

How many children liked chicken pizza?

A  $3\frac{1}{2}$

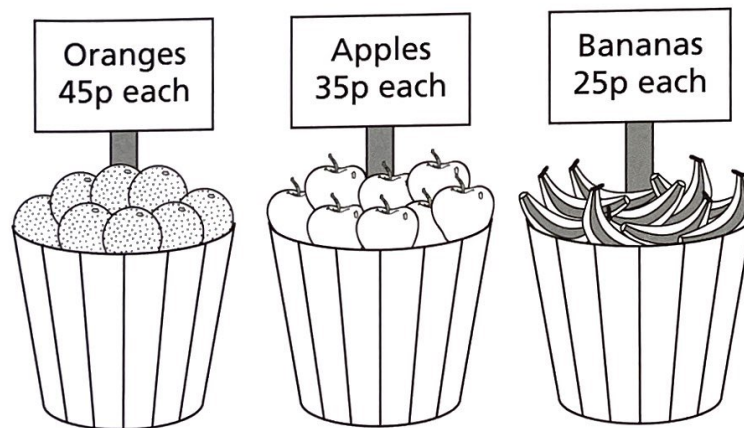
B 4

C 18

D 28

E 32

2



Which of these costs exactly £1.50?

A 3 oranges, 1 banana

B 3 apples, 1 banana

C 1 orange, 2 apples, 1 banana

D 2 oranges, 1 apple, 1 banana

E 1 orange, 1 apple, 2 bananas

3

Which of these statements could be true?

- A Jack's teacher is 0.17 centimetres tall.
- B Jack's teacher is 0.17 metres tall.
- C Jack's teacher is 1.7 centimetres tall.
- D Jack's teacher is 1.7 metres tall.
- E Jack's teacher is 17 centimetres tall.

4

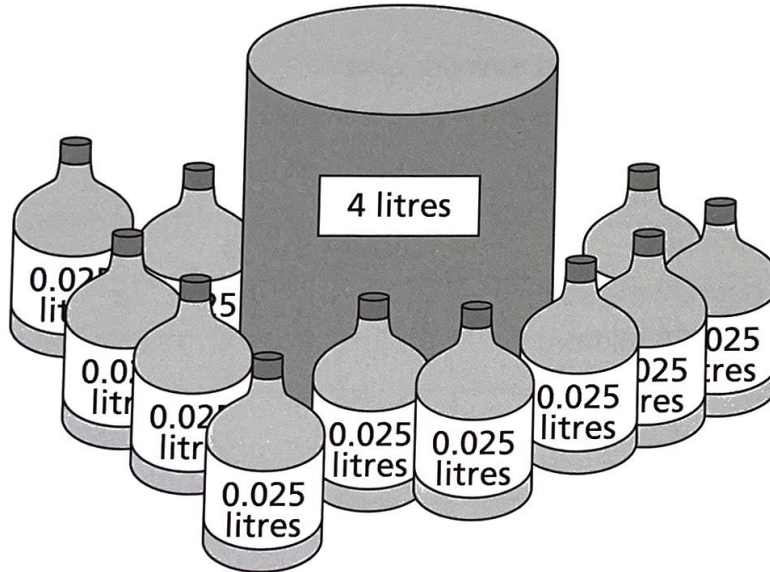
$$63 \times 324 = 20\,412$$

What is  $63 \times 648$ ?

- A 5832      B 10206      C 23328      D 32463      E 40824

5

Rosie makes 4 litres of bath oil.  
She puts it into bottles that hold 0.025 litres.

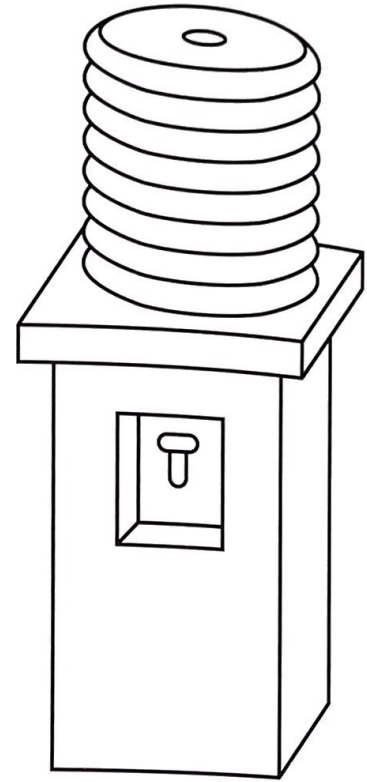


How many bottles can she fill?

- A 16      B 40      C 160      D 400      E 4000

6

A full water bottle contains 19 litres of water.  
Yu Lin puts 250 millilitres of water from the  
bottle into each of three cups.



**How much water is left in the bottle?**

- A 1.15 litres
- B 11.5 litres
- C 16.5 litres
- D 18.25 litres
- E 18.75 litres

7

One evening, Tia started her homework at half past four.  
She finished it at twenty minutes to six.

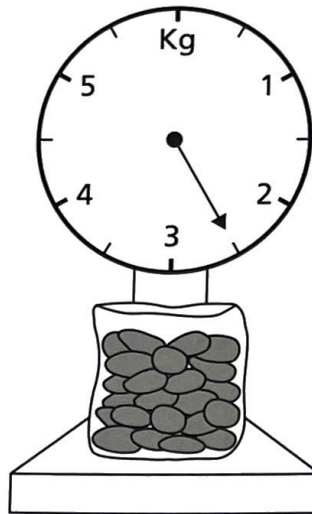
**How long did her homework take?**

- A 1 hour 10 minutes
- B 1 hour 50 minutes
- C 50 minutes
- D 1 hour 30 minutes
- E 1 hour 20 minutes

8

Potatoes cost £1.20 per kilogram.

What is the cost of these potatoes?



A £2.40

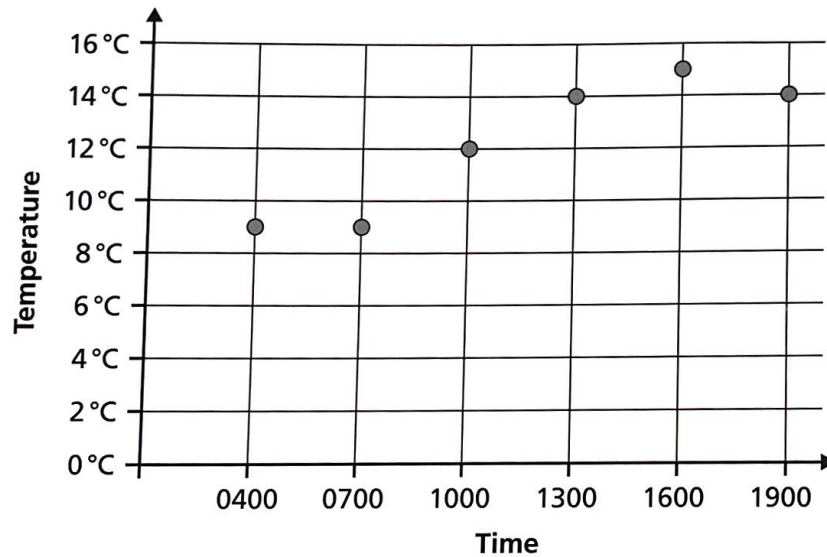
B £3.00

C £2.10

D £2.50

E £2.75

9



The graph shows the temperature at different times on one day.

What is the difference between the lowest and the highest temperature?

A 2°C

B 6°C

C 9°C

D 13°C

E 15°C

10

Which of these is the biggest number?

A 0.87

B 14.27

C 25.3

D 3.69

E 4.48

11

If 1st April is a Wednesday, what day of the week will 1st May be?

A Friday

B Saturday

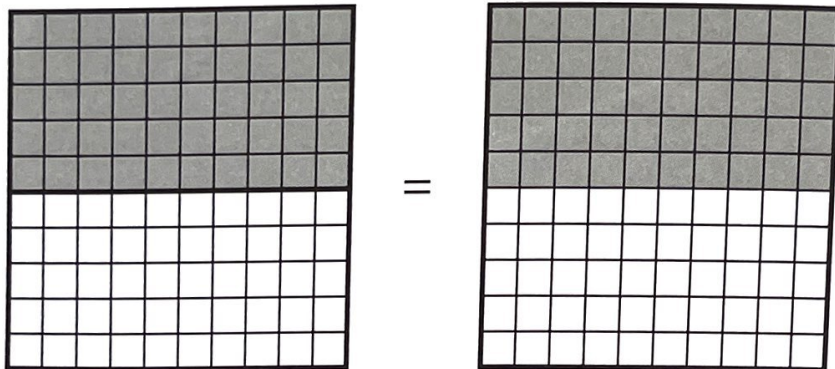
C Thursday

D Sunday

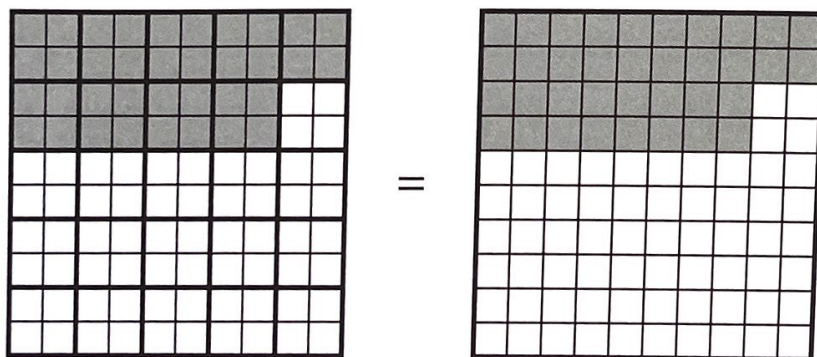
E Monday

12

These diagrams show that  $\frac{1}{2} = 50\%$ .



What do these diagrams show?



A  $\frac{1}{4} = 25\%$

B  $\frac{9}{20} = 45\%$

C  $\frac{1}{5} = 20\%$

D  $\frac{1}{3} = 33\frac{1}{3}\%$

E  $\frac{9}{25} = 36\%$

# 13

Mrs Woods ordered some school textbooks.  
She worked out her order on rough paper.  
She then began to copy the order onto the order form, as shown below.

Textbook	Price	Number required	Total price
Maths books	£5.30	10	£53.00
Science books	£6.20		?
		Postage	£1.50
		Total	£85.50

She had to pay £85.50 in total, including £1.50 for postage.

**How many science books did she order?**

- A** 3                      **B** 5                      **C** 11                      **D** 12                      **E** 15
- 

# 14

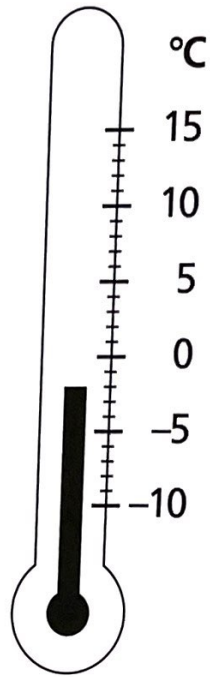
A rectangle has a perimeter of 30 cm.  
One of the shorter sides is 4 cm.

**What is the length of one of the longer sides?**

- A** 8 cm                      **B** 15 cm                      **C** 11 cm                      **D** 13 cm                      **E** 7.5 cm
-

15

Class 6 recorded the outside temperature every morning and afternoon. On Saturday morning, Oti read the temperature.



In the afternoon, the temperature had gone up by 6°C.

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

- A 4°C      B 8°C      C 2°C      D 6°C      E 10°C

16

Ravi divides a large number by a smaller number. The remainder is 5.

**Which of these numbers could he have divided by?**

- A 2      B 3      C 4      D 5      E 6



17

<p style="text-align: center;"><b>FLAVOURS</b> Choice of the day</p> <hr/> <ol style="list-style-type: none"><li>1. Vanilla</li><li>2. Chocolate</li><li>3. Strawberry</li><li>4. Mint</li><li>5. Peach</li><li>6. Tutti Frutti</li></ol>
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An ice cream kiosk sells cones with two scoops of ice cream. It offers a choice of six different flavours each day. The scoops may be the same flavour or different flavours.

**How many different combinations of ice cream flavours does the kiosk offer each day?**

- A 21                      B 30                      C 18                      D 36                      E 15
- 

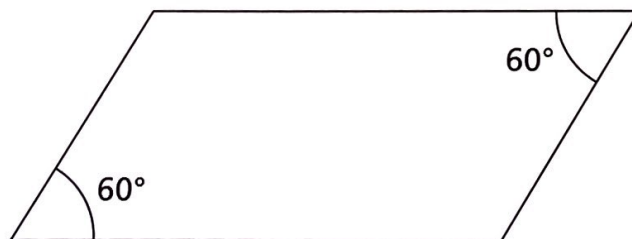
18

**What is 34.96 rounded to the nearest tenth?**

- A 30.0                      B 34.0                      C 34.95                      D 34.96                      E 35.0
- 

19

Two of the angles in this parallelogram are  $60^\circ$ .



**What are the other two angles?**

- A  $40^\circ$                       B  $90^\circ$                       C  $120^\circ$                       D  $150^\circ$                       E  $220^\circ$

20

Ben writes a sequence of numbers. He uses the rule:

*Add up the last two numbers, and then subtract 3.*

The first five numbers in the sequence are:

6 7 10 14 21

**What is the seventh number in Ben's sequence?**

- A 28                      B 32                      C 35                      D 50                      E 53

21

## More dogs choose Doggo Biscuits

In an independent experiment nearly one in five dogs chose Doggo Biscuits, but only 25% chose the next favourite biscuit.

This advertisement is misleading.

**Why?**

- A According to the figures in the advertisement, fewer dogs chose Doggo Biscuits than the next favourite biscuit.
- B The experiment cannot have been independent.
- C The dogs in the experiment were all more used to Doggo Biscuits than to other sorts of biscuits.
- D It does not say what the other dogs did.
- E The dogs might change their minds next time.

22

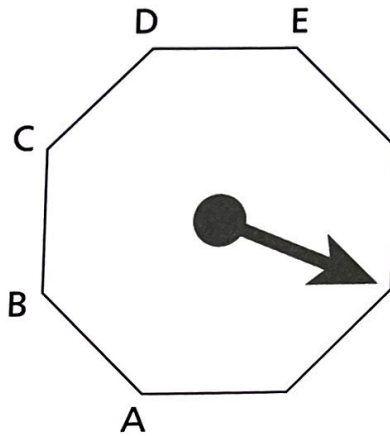
A crate contains 48 tins of beans and the total mass is 24.8 kilograms. The empty crate has a mass of 800 grams.

**What is the mass of one tin of beans?**

- A** 400g      **B** 500g      **C** 600g      **D** 700g      **E** 800g
- 

23

The arrow is pointing towards one corner of this regular octagon.



**If the arrow turns clockwise through  $225^\circ$ , to which corner will it be pointing?**

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

24

A swimming pool charges £5 for entry.

You can save  $\frac{1}{5}$  of the entry fee with a membership card.

Briony buys a membership card, which costs £6.50.

**After how many visits will she have saved the cost of the card?**

A 5

B 4

C 6

D 3

E 7

25

A regular polygon has an interior angle of  $120^\circ$ .

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

A equilateral triangle

B octagon

C decagon

D hexagon

E pentagon

26

**Which of these numbers has the smallest value?**

A 1

B -1

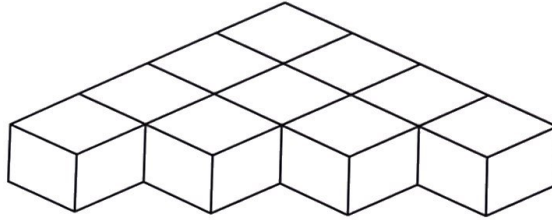
C 0

D 2

E -2

27

This solid is made from ten small wooden cubes.



The whole solid is painted red.

**How many of the small cubes have only two faces painted red?**

- A 1                      B 2                      C 3                      D 4                      E 5

28

A number is first squared, then divided by 10.  
The answer is 1.6.

**What is the number?**

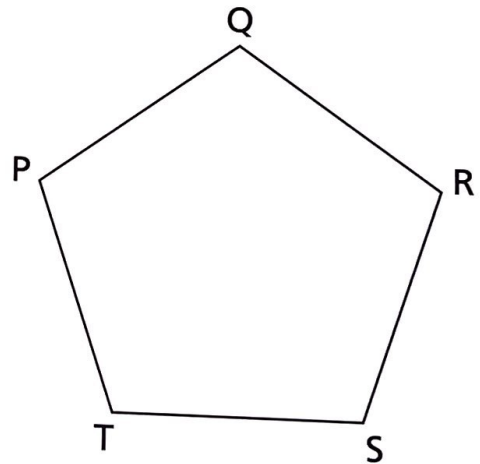
- A 4                      B 8                      C 12                      D 16                      E 20

29

Ameena has drawn a regular pentagon.  
She joins P to R and P to S with straight lines.  
This divides the shape into three triangles.

**What sort of triangles are they?**

- A 2 isosceles and 1 equilateral  
B 2 equilateral and 1 isosceles  
C 3 isosceles  
D 2 scalene and 1 equilateral  
E 2 isosceles and 1 scalene



30

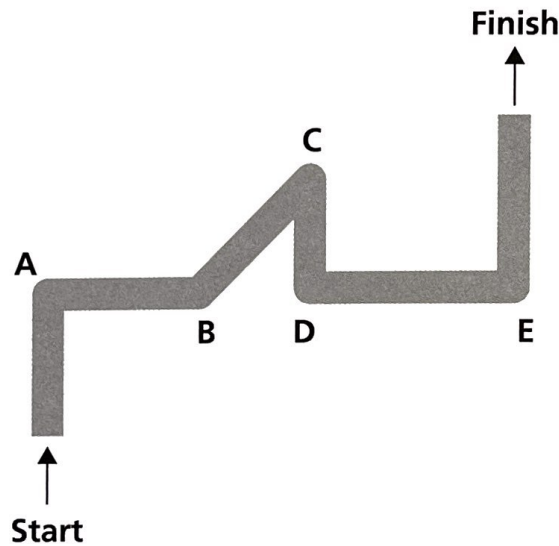
Ruby and Hamal each have a packet of biscuits. The two packets contain the same number of biscuits.  
Ruby gives half of her biscuits to Mike.  
Hamal gives a quarter of his biscuits to Mike.

Which of these statements is now true?

- A Ruby has more biscuits than Mike.
- B Hamal has more biscuits than Mike.
- C Ruby and Hamal each have the same number of biscuits.
- D Ruby and Mike each have the same number of biscuits.
- E Hamal and Mike each have the same number of biscuits.

31

A robot moves along this path from Start to Finish.



At what point does the robot turn through more than a right angle?

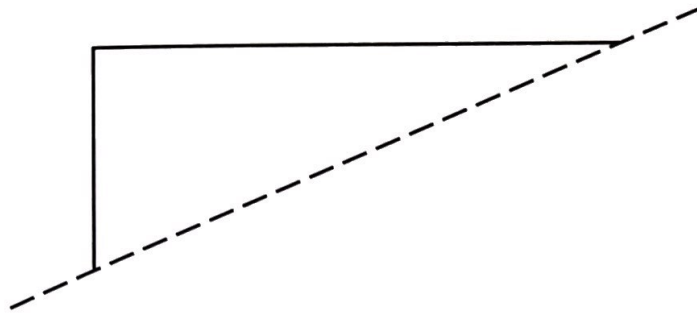
- A A
- B B
- C C
- D D
- E E

32

Which of these sums gives the largest answer?

- A  $17 \times 18 + 16 - 15$
- B  $18 \times 17 + 15 - 16$
- C  $15 \times 16 + 17 - 18$
- D  $17 \times 16 + 18 - 15$
- E  $15 \times 17 + 18 - 16$

33



Rory is drawing a quadrilateral.  
The diagram shows two of its sides.  
The dotted line is a line of symmetry.

Which quadrilateral is Rory drawing?

- A trapezium
- B rectangle
- C kite
- D parallelogram
- E rhombus

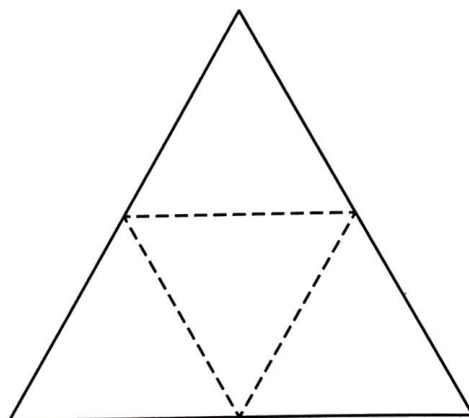
34

Kumi buys four mugs of tea.  
He pays with a £5 note and gets £1.60 change.

What is the cost of one mug of tea?

- A 40p
- B £3.40
- C 85p
- D £1.25
- E £1.10

35



This net is cut out of cardboard.  
It is folded along the dashed lines.

**Which 3D shape will it make?**

- A triangular prism
- B square-based pyramid
- C cuboid
- D triangular pyramid
- E none of these

36

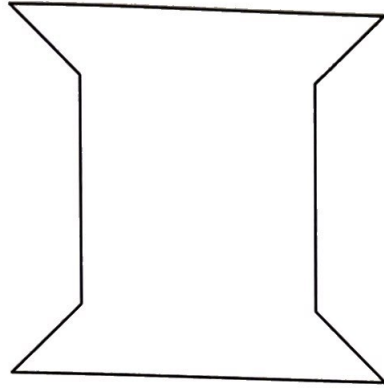
A recipe needs 500 g of flour and 150 ml of milk.  
Mr Price only has 400 g of flour.

**How much milk should he use?**

- A 100 ml      B 50 ml      C 120 ml      D 30 ml      E 180 ml



37



This shape can be made by putting other shapes together.

**Which combination could NOT make this shape?**

- A 2 quadrilaterals
- B 4 triangles
- C 2 hexagons
- D 1 square and 2 trapeziums
- E 2 pentagons

38

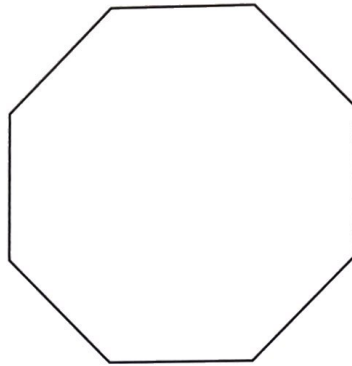
Yola started at 0 and counted up in steps of  $1\frac{1}{4}$ .  
She wrote down her sequence of numbers.

**Which of these numbers was in her sequence?**

- A 1                      B 2                      C 3                      D 4                      E 5

39

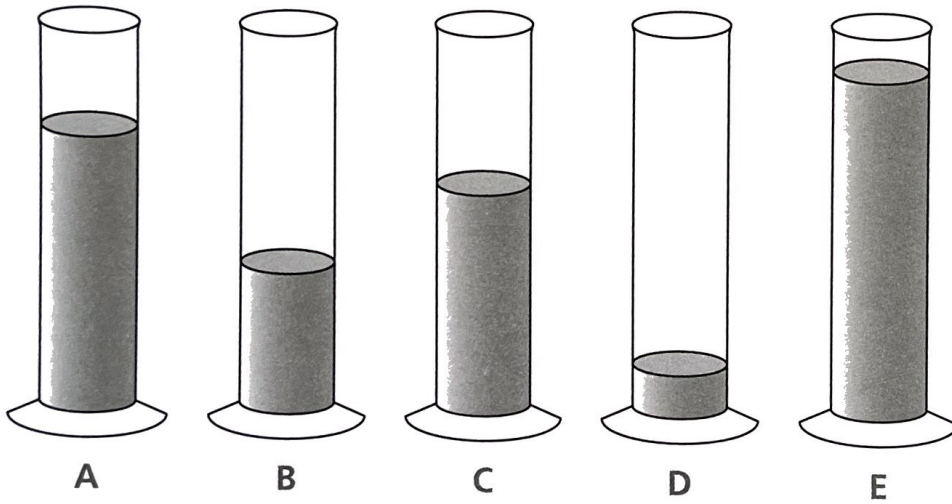
Jackie draws two lines in this regular octagon to divide it into four quadrilaterals that are all the same size and shape.



What kind of quadrilateral are they?

- A kites
- B rectangles
- C parallelograms
- D squares
- E trapeziums

40



A container can hold 1 litre of liquid.  
Kieran had put 75 ml of water in it.

Which diagram best shows the correct water level?

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

41

Susan knows that one of these is equal to one million.

- A number of millimetres in a metre
- B number of milligrams in a kilogram
- C number of square centimetres in a square metre
- D number of seconds in 100 hours
- E number of pennies in £1000

**Which one is it?**

A A

B B

C C

D D

E E

42

For a fan oven, cooking times are reduced by one-sixth of the time needed in an ordinary oven.

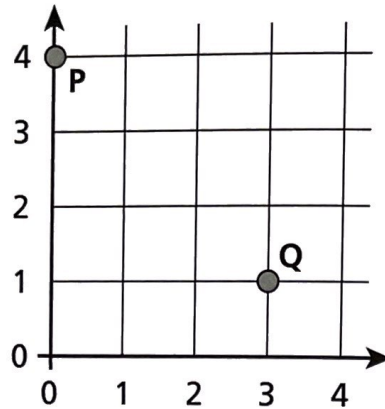
A fruit cake takes  $2\frac{3}{4}$  hours to cook in an ordinary oven.

**How long would it take in a fan oven, to the nearest minute?**

- A 2 hours 4 minutes
- B 2 hours 20 minutes
- C 2 hours 15 minutes
- D 2 hours 18 minutes
- E 2 hours 14 minutes

43

Points P and Q are two corners of a square.



Which of these pairs of coordinates could mark the other two corners of the square?

- A (0, 1) and (3, 4)
- B (1, 0) and (4, 3)
- C (3, 4) and (1, 0)
- D (4, 3) and (0, 1)
- E (3, 4) and (1, 1)

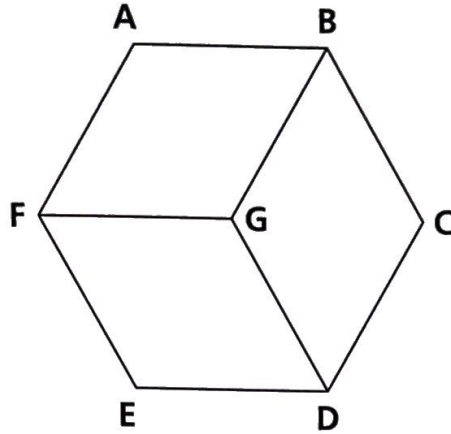
44

There are 27 children in a club.

Which of these statements **CANNOT** be true?

- A There are more boys than girls in the club.
- B There are more girls than boys in the club.
- C There are three more boys than girls in the club.
- D There are six more girls than boys in the club.
- E There are nine more boys than girls in the club.

45



G is the middle of this regular hexagon.  
 AB and FG form one pair of parallel lines.

**How many pairs of parallel lines are there altogether in the diagram?**

- A** 4                      **B** 9                      **C** 3                      **D** 6                      **E** 12

46

Farmer Dunphy has 15 metres of fencing.  
 He wants to make a closed rectangular pen.  
 He uses a long wall for one of the sides.  
 Each side of the pen is a whole number in metres.

**What is the largest area that the pen can be?**

- A** 25 m<sup>2</sup>              **B** 27 m<sup>2</sup>              **C** 30 m<sup>2</sup>              **D** 28 m<sup>2</sup>              **E** 22 m<sup>2</sup>

47

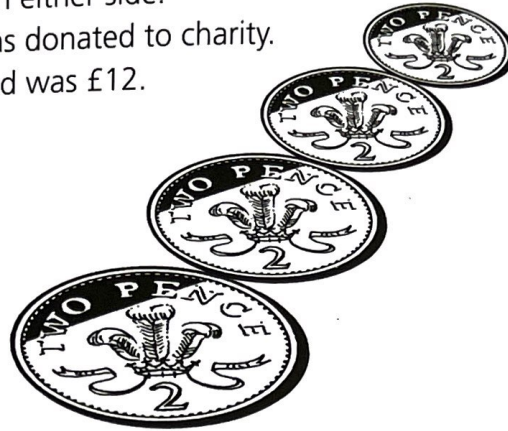
Mr Robinson wants to paint both sides of his garden fence.  
 The fence is 20 metres long and 1.4 metres high.  
 1 litre of paint will cover 10 square metres of fence.

**How many 1-litre tins of paint must he buy?**

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

48

A 2p coin measures 2.5 cm across.  
A line of 2p coins was created.  
Each coin touched the coins on either side.  
The total value of the coins was donated to charity.  
The amount of money collected was £12.

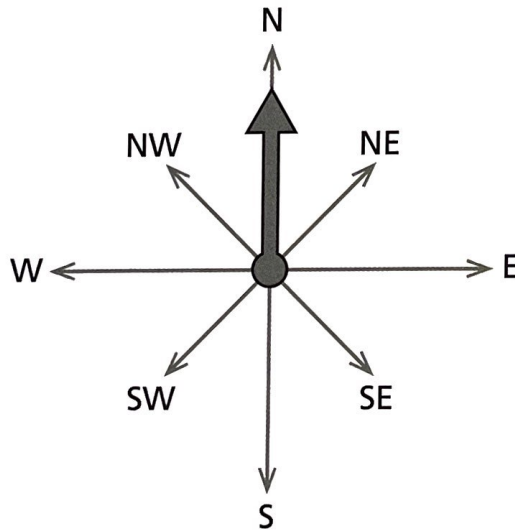


How long was the line, in metres?

- A 3m      B 15m      C 30m      D 150m      E 300m

49

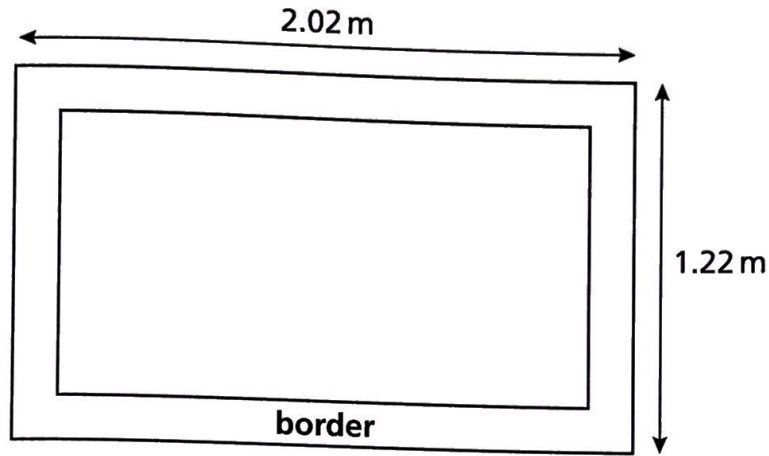
The pointer turns clockwise from north to south-east.



What angle does it turn through?

- A 135°      B 180°      C 150°      D 165°      E 120°

50



A special shape is 2.02 m long and 1.22 m wide.  
A double row of tiles makes a border.  
Each tile is 2 cm by 2 cm.

**How many tiles are needed to make the border?**

- A** 648      **B** 624      **C** 632      **D** 640      **E** 636