

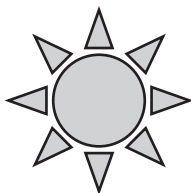


- 1 Write down the number seventy one thousand and seventy two in figures.

Answer .....

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2

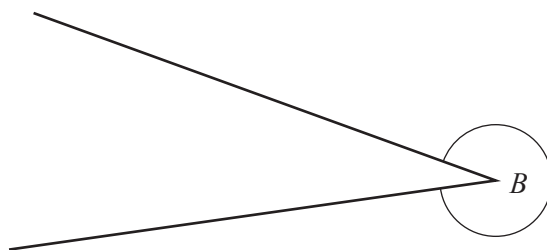


Write down the order of rotational symmetry of this shape.

Answer ..... [1]

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- 3 Measure the reflex angle at  $B$ .



Answer ..... [1]

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- 4 Work out  $\frac{4}{9}$  of 153.

Answer ..... [1]

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- 5 1 euro = \$1.234 .

Change 155 euros into dollars.

Answer \$ ..... [1]

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- 6 (a) Write  $\frac{4500}{5500}$  as a fraction in its simplest form.

Answer(a) ..... [1]

(b) Write 0.73 as a fraction.

Answer(b) ..... [1]

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7 The probability that Raju arrives on time at school is 0.72 .

(a) Write down the probability that he will **not** arrive on time.

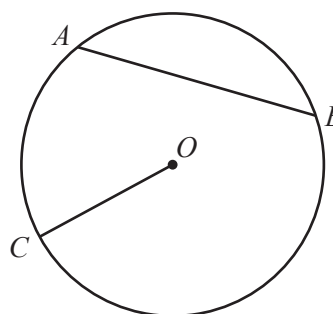
Answer(a) .....

(b) Raju attends school on 200 days.

Work out the expected number of days he will arrive on time.

Answer(b) ..... [1]

8 The diagram shows a circle, centre  $O$ .  
 $A$ ,  $B$  and  $C$  are points on the circumference.



NOT TO SCALE

Write down the mathematical name of the straight line

(a)  $OC$ ,

Answer(a) ..... [1]

(b)  $AB$ .

Answer(b) ..... [1]

9 The point  $P$  has co-ordinates  $(2, -5)$  and  $\vec{PQ} = \begin{pmatrix} 6 \\ -7 \end{pmatrix}$ .

(a) Write down the co-ordinates of  $Q$ .

Answer(a) (....., .....) [1]

(b) Write  $4\vec{PQ}$  as a column vector.

Answer(b)  $\begin{pmatrix} \phantom{0} \\ \phantom{0} \end{pmatrix}$  [1]

10 Find the lowest common multiple (LCM) of 24 and 32.

Answer ..... [2]

- 11 The volume,  $V$ , of a cylinder with radius  $r$  and height  $h$  is  $V = \pi r^2 h$ .

Calculate the volume of a cylinder with radius 7 cm and height 8 cm.

Answer ..... cm<sup>3</sup> [2]

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- 12 \$760 is invested for 3 years at a rate of 4.5% per year simple interest.

Work out the total interest at the end of the 3 years.

Answer \$ ..... [2]

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- 13 (a) Simplify

(i)  $x^0$ ,

Answer(a)(i) ..... [1]

(ii)  $m^4 \times m^3$ .

Answer(a)(ii) ..... [1]

(b) Solve  $5x^3 = 40$ .

Answer(b)  $x =$  ..... [1]

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- 14 Ahmed, Batuk and Chand share \$1000 in the ratio 8 : 7 : 5.

Calculate the amount each receives.

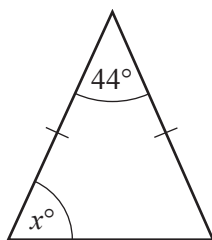
Answer Ahmed \$ .....

Batuk \$ .....

Chand \$ ..... [3]

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15 (a)



NOT TO SCALE

The diagram shows an isosceles triangle.

Find the value of  $x$ .

Answer(a)  $x = \dots\dots\dots$  [1]

(b) (i) The exterior angle of a regular polygon is  $24^\circ$ .

Find the number of sides of this regular polygon.

Answer(b)(i)  $\dots\dots\dots$  [2]

(ii) Write down the mathematical name for a 5-sided polygon.

Answer(b)(ii)  $\dots\dots\dots$  [1]

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16 Without using your calculator, work out  $2\frac{7}{9} \div \frac{5}{6}$ .

Give your answer as a fraction in its lowest terms.  
You must show each step of your working.

Answer  $\dots\dots\dots$  [4]

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17                                  6      8      14      36      47      50      130

From the list of numbers, write down one number for each of the following.

- (a) An odd number.                                  *Answer(a)* ..... [1]
- (b) A square number.                                  *Answer(b)* ..... [1]
- (c) A factor of 70.                                  *Answer(c)* ..... [1]
- (d) A multiple of 26.                                  *Answer(d)* ..... [1]

- 18 (a) Solve the simultaneous equations.  
You must show all your working.

$$\begin{aligned} 4x + 2y &= 31 \\ 6x - 2y &= 34 \end{aligned}$$

*Answer(a)*  $x =$  .....

$y =$  ..... [2]

- (b) Factorise  $14p^2 + 21pq$ .

*Answer(b)* ..... [2]

- 19 Idris has  $c$  toy cars.

Fadl has twice as many cars as Idris.

Baasim has three more cars than Fadl.

- (a) Write down an expression, in terms of  $c$ , to complete each statement.

Fadl has ..... cars.

Baasim has ..... cars. [2]

- (b) Write down an expression, in terms of  $c$ , for the total number of cars the three children have.  
Give your answer in its simplest form.

*Answer(b)* ..... [2]

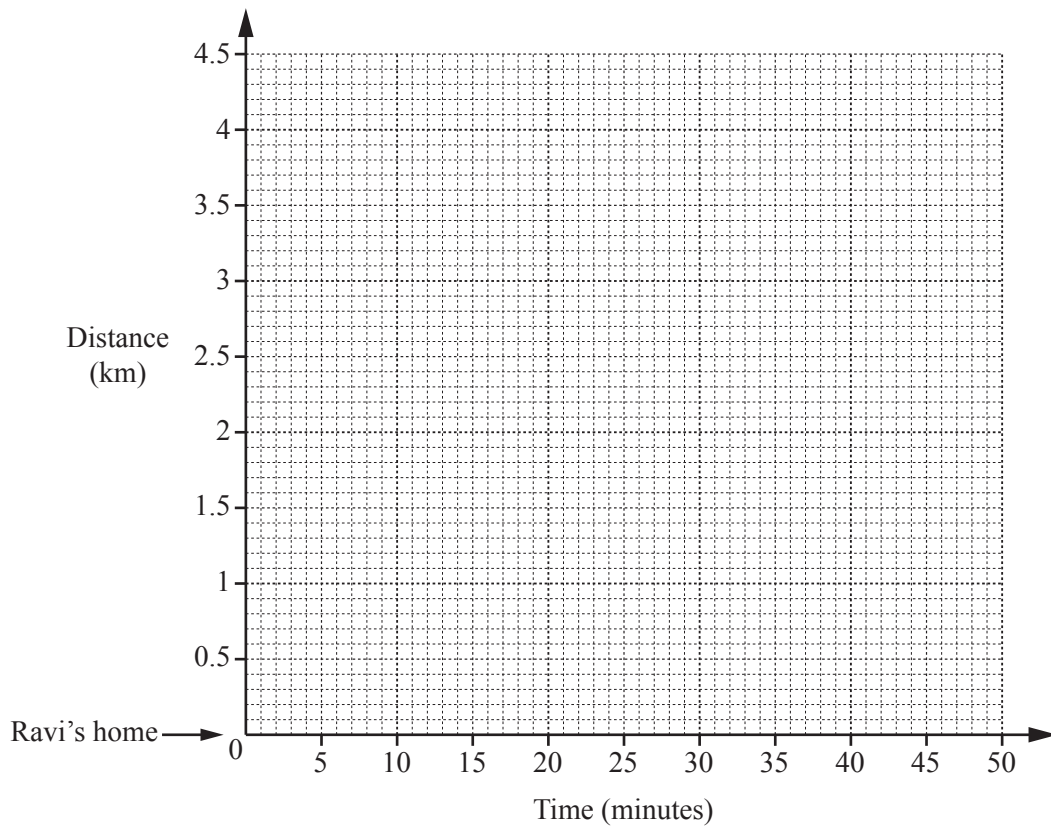
- 20 Ravi cycles from home to the bank.  
It takes him 15 **minutes**, cycling at a constant speed of 14 km/h.

(a) Work out how far Ravi cycles from home to the bank.

Answer(a) ..... km [1]

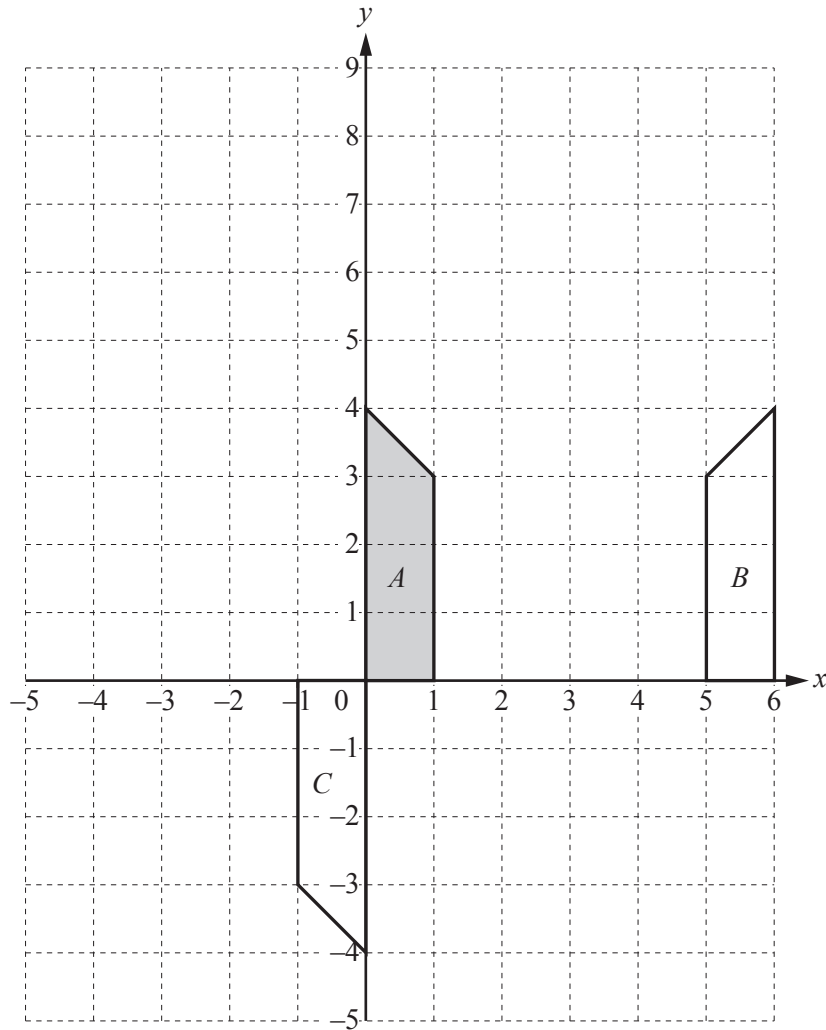
- (b) Ravi stays at the bank for 18 minutes.  
He then cycles home at a constant speed for 12 minutes.

Draw the travel graph to show Ravi's journey since he left home.



[3]

Question 21 is printed on the next page.



Three shapes *A*, *B* and *C* are shown on the grid.

(a) Describe fully the **single** transformation that maps shape *A* onto

(i) shape *B*,

Answer(a)(i) .....

..... [2]

(ii) shape *C*.

Answer(a)(ii) .....

..... [3]

(b) Enlarge shape *A* by scale factor 2 from the centre (4, 0). [2]

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