



- 1 (a) Write down ten thousand and seventy three in figures.

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

- (b) Work out  $13 + 5 \times 4 - 2$ .  
Write down all the steps of your working.

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

- 2 Write down the next term in each sequence.

(a) 1, 2, 4, 8, 16, ..... [1]

(b) 23, 19, 15, 11, 7, ..... [1]

- 3 Write down the time and date which is 90 hours after 20 30 on May 31st.

Answer Time .....

Date ..... [2]

- 4 Factorise completely.

$$2xy - 4yz$$

Answer ..... [2]

- 5 Insert  $<$  or  $>$  or  $=$  in the spaces provided to make correct statements.

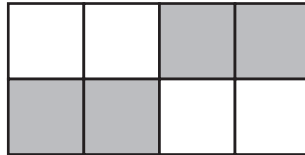
(a)  $\frac{3}{11}$  ..... 0.273 [1]

(b) 1.1 ..... 111% [1]

- 6 Make  $x$  the subject of the formula.  $y = \frac{x}{3} + 5$

Answer  $x =$  ..... [2]

7



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For the diagram, write down

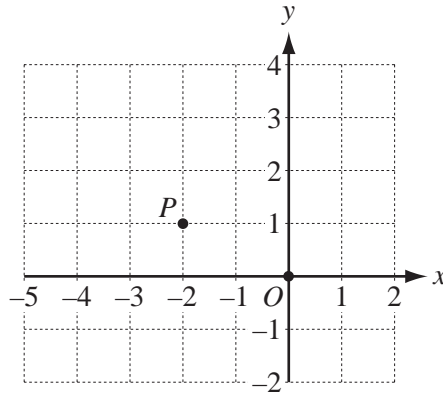
(a) the number of lines of symmetry,

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

(b) the order of rotational symmetry.

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

8



In the diagram  $O$  is the origin and  $P$  is the point  $(-2, 1)$ .

(a) Write  $\vec{OP}$  as a column vector.

Answer(a)  $\vec{OP} = \begin{pmatrix} \phantom{0} \\ \phantom{0} \end{pmatrix}$  [1]

(b)  $\vec{PQ} = \begin{pmatrix} 3 \\ -2 \end{pmatrix}$

Mark the point  $Q$  on the diagram. [1]

9 Using integers between 10 and 30, write down

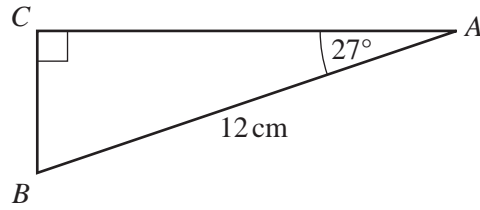
(a) an odd multiple of 7,

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

(b) a cube number.

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

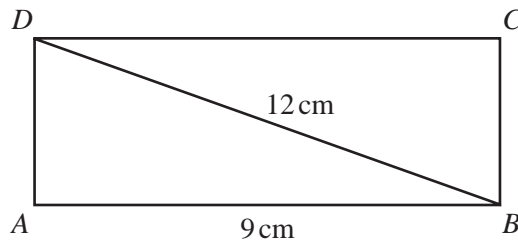
10

NOT TO  
SCALE

In triangle  $ABC$ ,  $AB = 12$  cm, angle  $C = 90^\circ$  and angle  $A = 27^\circ$ .  
Calculate the length of  $AC$ .

Answer  $AC =$  ..... cm [2]

11

NOT TO  
SCALE

In the rectangle  $ABCD$ ,  $AB = 9$  cm and  $BD = 12$  cm.  
Calculate the length of the side  $BC$ .

Answer  $BC =$  ..... cm [3]

12 (a) Write 16 460 000 in standard form.

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

(b) Calculate  $7.85 \div (2.366 \times 10^2)$ , giving your answer in standard form.

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

- 13 (a) Find the value of  $x$  when  $\frac{18}{24} = \frac{27}{x}$ .

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

- (b) Show that  $\frac{2}{3} \div 1\frac{1}{6} = \frac{4}{7}$ .

Write down all the steps in your working.

Answer(b)

[2]

- 14 (a) A drinking glass contains 55 cl of water.  
Write 55 cl in litres.

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

- (b) The mass of grain in a sack is 35 kg.  
The grain is divided equally into 140 bags.

Calculate the mass of grain in each bag.  
Give your answer in grams.

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

- 15 (a) Write 67.499 correct to the nearest integer.

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

- (b) Write 0.003040506 correct to 3 significant figures.

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

- (c)  $d = 56.4$ , correct to 1 decimal place.

Write down the lower bound of  $d$ .

Answer(c) ..... [1]

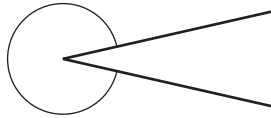
16 Solve the simultaneous equations.

$$\begin{aligned}x + 2y &= 3 \\ 2x - 3y &= 13\end{aligned}$$

Answer  $x =$  .....

$y =$  ..... [3]

17 (a)



What type of angle is shown by the arc on the diagram?

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

(b)  $ABCD$  is a quadrilateral.

- $AB$  is parallel to  $DC$ .
- $BC$  is longer than  $AD$ .

(i) Draw a possible quadrilateral  $ABCD$ .

Answer(b)(i)

[1]

(ii) Write down the geometrical name for the quadrilateral  $ABCD$ .

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

- 18 Eva invests \$120 at a rate of 3% per year **compound interest**.

Calculate the total amount Eva has after 2 years.  
Give your answer correct to 2 decimal places.

Answer \$ ..... [3]

- 19 At a ski resort the temperature, in  $^{\circ}\text{C}$ , was measured every 4 hours during one day.

The results were  $-12^{\circ}$ ,  $-13^{\circ}$ ,  $-10^{\circ}$ ,  $4^{\circ}$ ,  $4^{\circ}$ ,  $-6^{\circ}$ .

- (a) Find the difference between the highest and the lowest of these temperatures.

Answer(a) .....  $^{\circ}\text{C}$  [1]

- (b) Find

- (i) the mean,

Answer(b)(i) .....  $^{\circ}\text{C}$  [2]

- (ii) the median,

Answer(b)(ii) .....  $^{\circ}\text{C}$  [2]

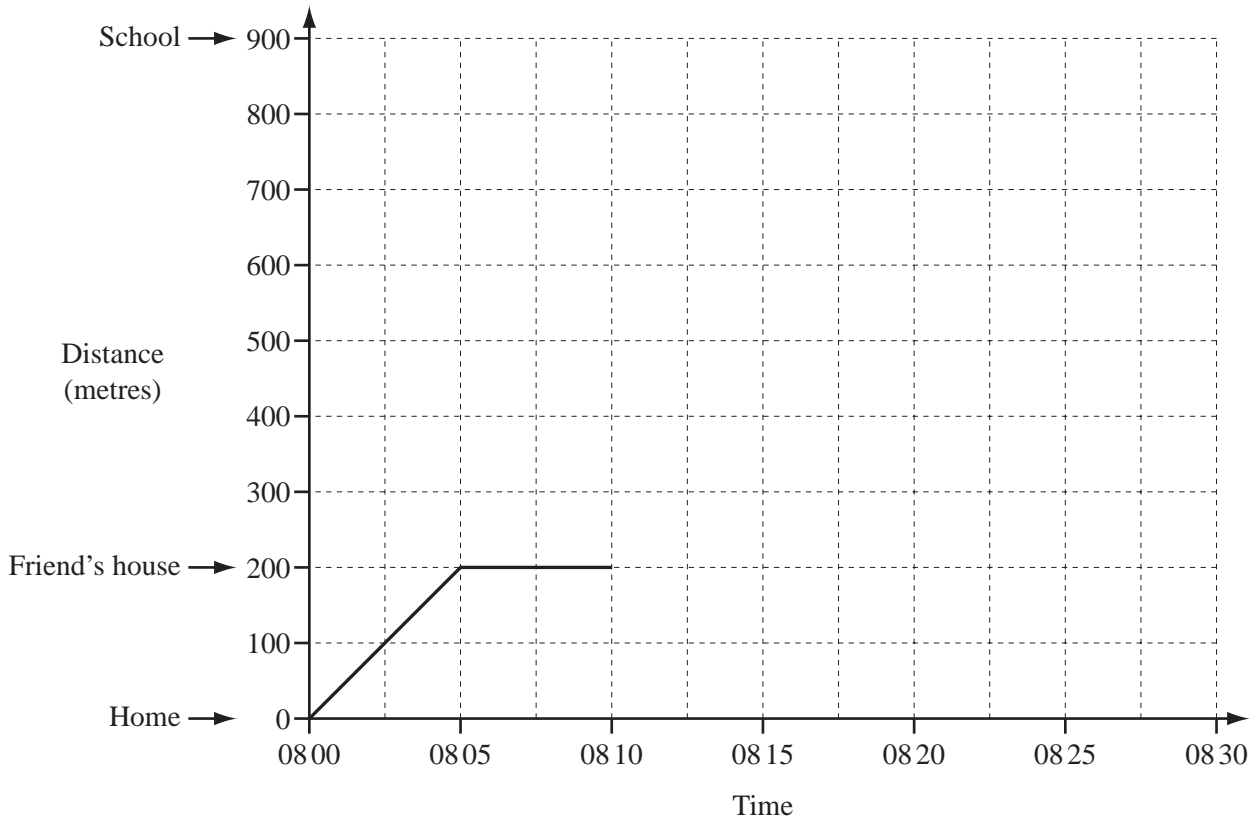
- (iii) the mode.

Answer(b)(iii) .....  $^{\circ}\text{C}$  [1]

Question 20 is printed on the next page.

20

For  
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Use



The graph shows part of Ali's journey from home to his school.  
The school is 900 m from his home.  
He walks 200 m to his friend's house and waits there.  
He then takes 20 minutes to walk with his friend to their school.

(a) Complete the travel graph showing Ali's journey. [1]

(b) How long does he wait at his friend's house?

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

(c) Calculate the average speed for Ali's complete journey from home to his school.  
Give your answer in **kilometres per hour**.

Answer(c) ..... km/h [4]

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