

- 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.

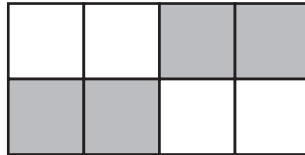
(a) $\frac{3}{11}$ 0.273 [1]

(b) 1.1 111% [1]

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

Answer $x =$ [2]

7



For the diagram, write down

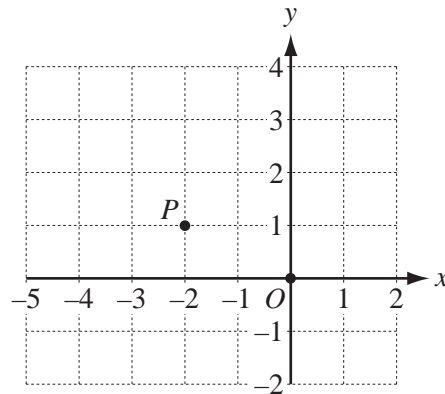
(a) the number of lines of symmetry,

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) $\vec{OP} = \begin{pmatrix} \\ \end{pmatrix}$ [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

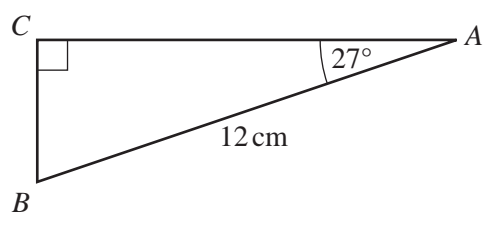
(a) an odd multiple of 7,

Answer(a) [1]

(b) a cube number.

Answer(b) [1]

10

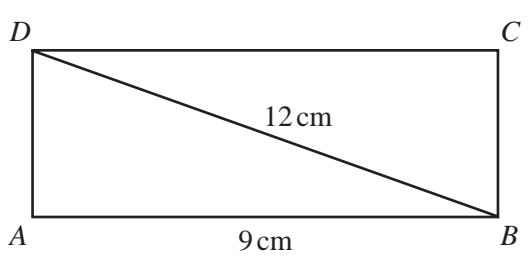


NOT TO SCALE

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]

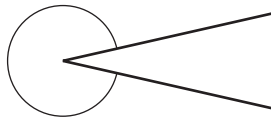
16 Solve the simultaneous equations.

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

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° , -13° , -10° , 4° , 4° , -6° .

- (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,

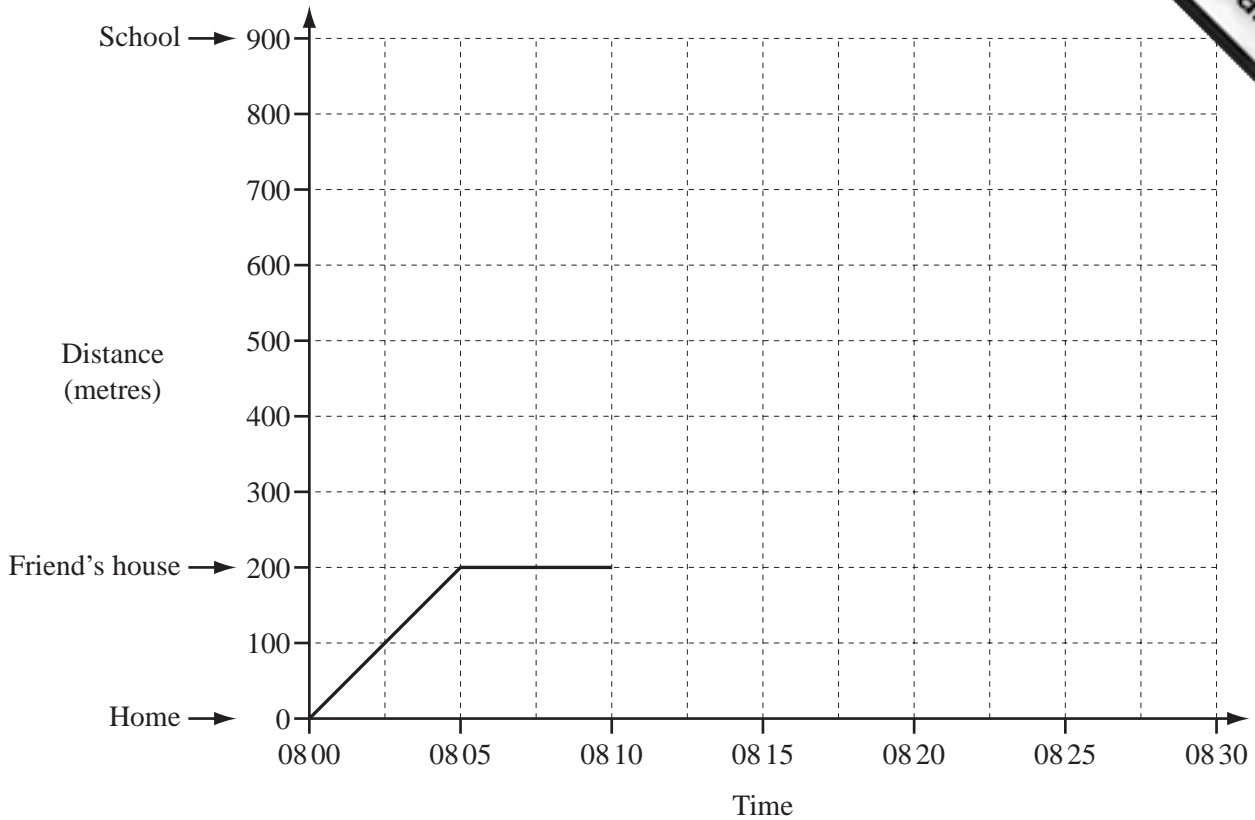
Answer(b)(ii) $^{\circ}\text{C}$ [2]

- (iii) the mode.

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

Question 20 is printed on the next page.

20



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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