

1

-3°C 8°C -19°C 42°C -7°C

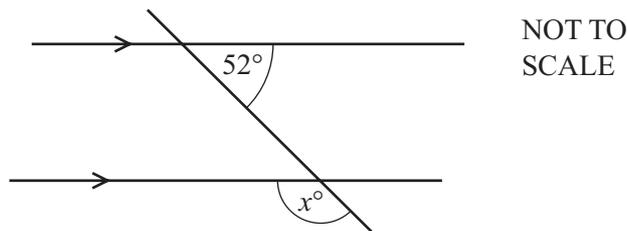
Write down the lowest temperature from this list.

Answer $^{\circ}\text{C}$ [1]

2 Change 6450 cm into metres.

Answer m [1]

3



In the diagram, a straight line intersects two parallel lines.

Find the value of x .

Answer $x =$ [1]

4 Calculate.

$$\frac{56.2 - 34.8}{-0.2}$$

Answer [1]

5 Write down the value of 7^0 .

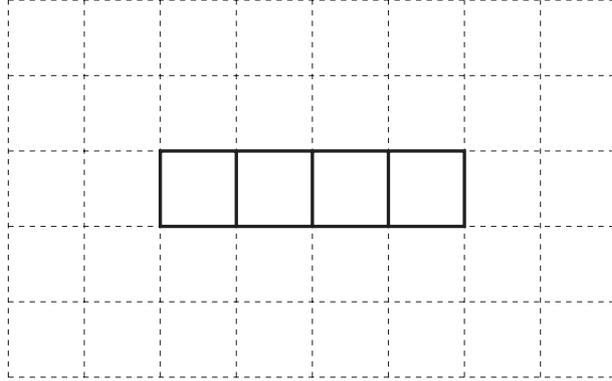
Answer [1]

6 Write 45 000 in standard form.

Answer [1]

7 Four faces of a cube are drawn on the grid.

Complete the net of this cube.



[1]

8 Write down all the prime numbers that are greater than 30 and less than 40.

Answer [1]

9

$$\mathbf{a} = \begin{pmatrix} -3 \\ 4 \end{pmatrix} \quad \mathbf{b} = \begin{pmatrix} 2 \\ 6 \end{pmatrix}$$

Write each of the following as a single vector.

(a) $2\mathbf{a}$

Answer(a) $\begin{pmatrix} \\ \end{pmatrix}$ [1]

(b) $\mathbf{a} - \mathbf{b}$

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

10 (a)

1 4 8 12 27 40

Write down the number from this list which is both a cube number and has a factor of 4.

Answer(a) [1]

(b) 1258 is a multiple of 34.

Write down a different multiple of 34 between 1200 and 1300.

Answer(b) [1]

11

-3 -5 1 0 3

Three different numbers from the list are added together to give the smallest possible total.

Complete the sum below.

..... + + =

[2]

12 The area of a square is 36 cm^2 .

Calculate the perimeter of this square.

Answer cm [2]

13 The mean of five numbers is 6.

Four of the numbers are 3, 4, 5, and 10.

Work out the number that is missing from the list.

Answer [2]

14 Find the value of $3a - 5b$ when $a = -4$ and $b = 2$.

Answer [2]

15 Celine buys a bag of 24 tulip bulbs.
There are 8 red bulbs and 5 white bulbs.
All of the other bulbs are yellow.

Celine chooses a bulb at random from the bag.

(a) Write down the probability that the bulb is red or white.

Answer(a) [1]

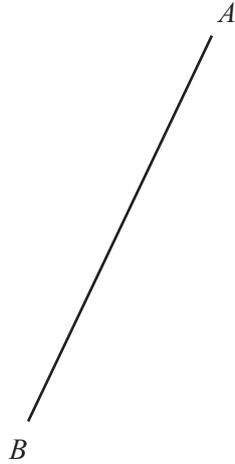
(b) Write down the probability that the bulb is yellow.

Answer(b) [1]

16 Find the fraction that is half-way between $\frac{1}{2}$ and $\frac{2}{3}$.

Answer [2]

- 17 Using a straight edge and compasses only, construct the perpendicular bisector of AB .
All construction arcs must be clearly shown.



[2]

- 18 Michelle sells ice cream.
The table shows how many of the different flavours she sells in one hour.

| | | | | |
|-------------|---------|------------|-----------|-------|
| Flavour | Vanilla | Strawberry | Chocolate | Mango |
| Number sold | 6 | 8 | 9 | 7 |

Michelle wants to show this information in a pie chart.

Calculate the sector angle for mango.

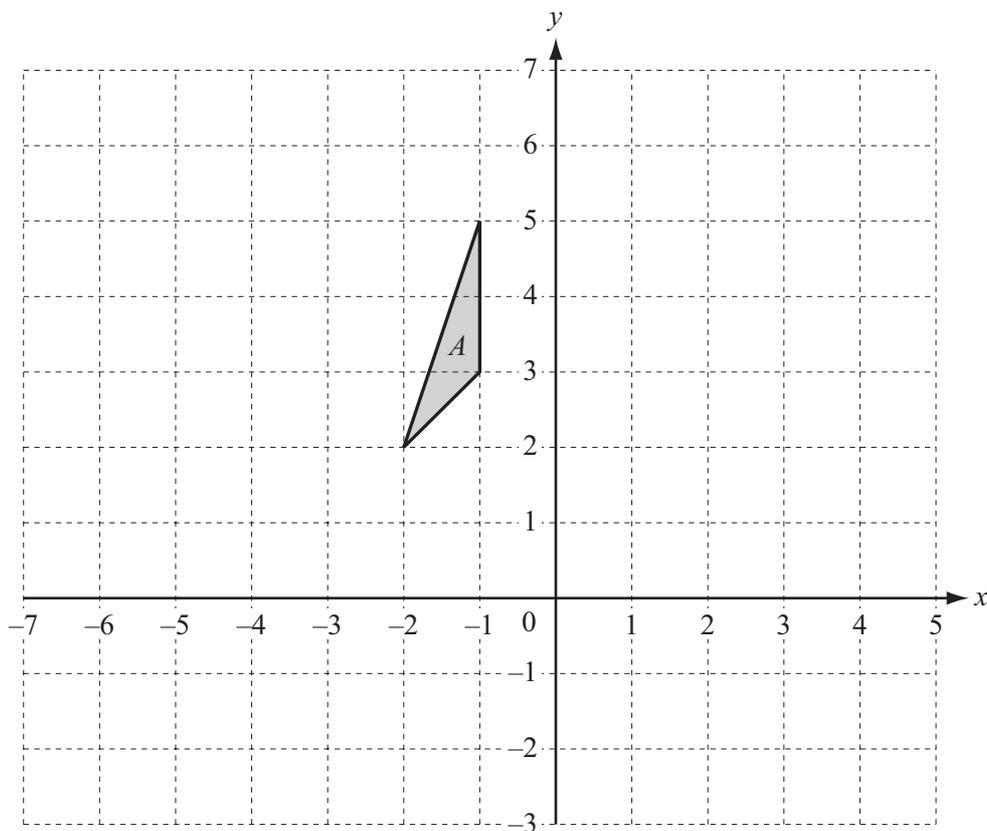
Answer [2]

19 Chris changes \$1350 into euros (€) when €1 = \$1.313 .

Calculate how much he receives.

Answer €..... [2]

20



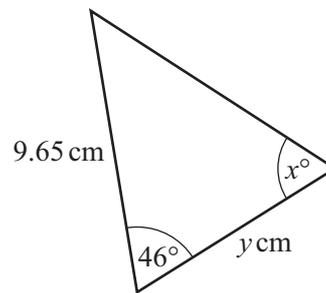
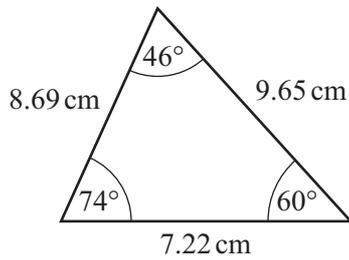
Draw the image of triangle A after a translation by the vector $\begin{pmatrix} 3 \\ -4 \end{pmatrix}$. [2]

21 Each exterior angle of a regular polygon is 30° .

Work out the number of sides the polygon has.

Answer [2]

22



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These two triangles are congruent.
Write down the value of

(a) x ,

Answer(a) $x =$ [1]

(b) y .

Answer(b) $y =$ [1]

23 Without using a calculator, work out $1\frac{1}{4} - \frac{7}{9}$.

Write down all the steps in your working.

Answer [3]

24 Solve the simultaneous equations.

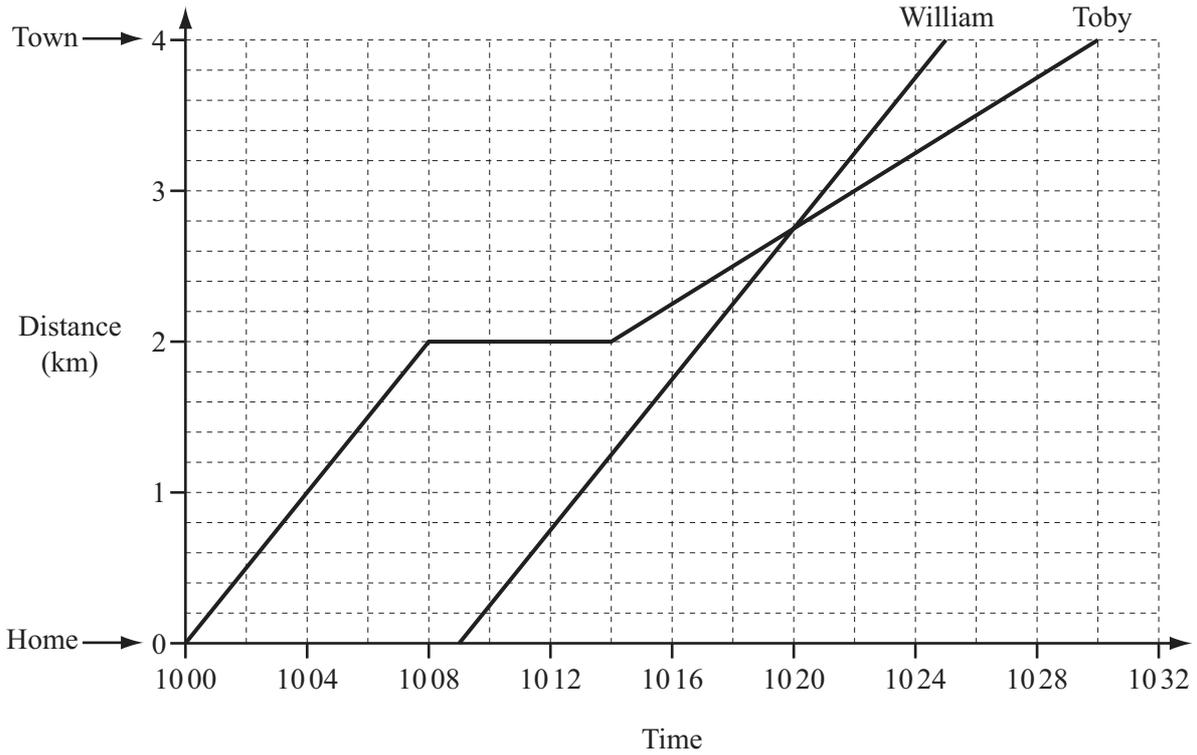
$$2x + 3y = 29$$

$$5x + y = 27$$

Answer $x =$

$y =$ [3]

25



Toby and William cycled into town.
 Their journeys are shown on the travel graph.

(a) For how many minutes did Toby stop on his journey into town?

Answer(a) min [1]

(b) Explain what happened at 1020.

Answer(b) [1]

(c) Work out how long William took to cycle into town.

Answer(c) min [1]

(d) Calculate William's speed in km/h.

Answer(d) km/h [2]

26 (a) Factorise completely.

$$15a^3 - 5ab$$

Answer(a) [2]

(b) Simplify.

$$3x^2y^3 \times x^4y$$

Answer(b) [2]

(c) Multiply out the brackets and simplify.

$$3(x - 2) - 4(2x - 3)$$

Answer(c) [2]

(d) Solve the equation.

$$8x + 9 = 3(x + 8)$$

Answer(d) $x =$ [3]

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