



1

$-3^{\circ}\text{C}$      $8^{\circ}\text{C}$      $-19^{\circ}\text{C}$      $42^{\circ}\text{C}$      $-7^{\circ}\text{C}$

Write down the lowest temperature from this list.

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

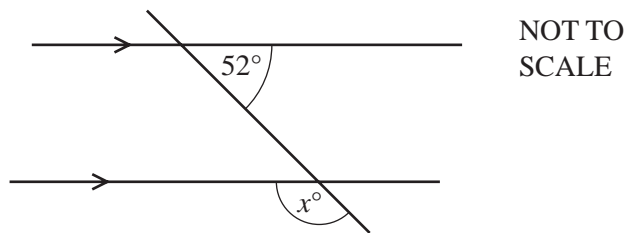
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2 Change 6450 cm into metres.

Answer ..... m [1]

---

3



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

Find the value of  $x$ .

Answer  $x =$  ..... [1]

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4 Calculate.

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

Answer ..... [1]

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5 Write down the value of  $7^0$ .

Answer ..... [1]

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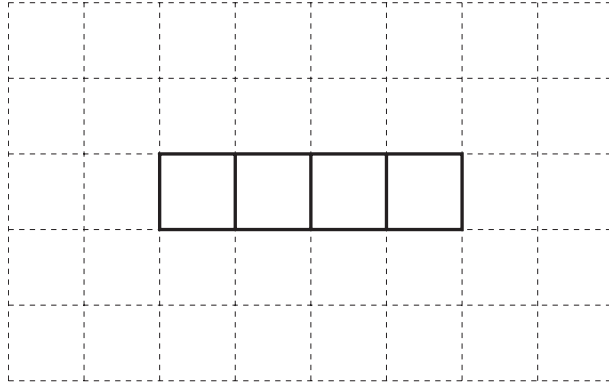
- 6 Write 45 000 in standard form.

Answer ..... [1]

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

Complete the net of this cube.



[1]

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

Answer ..... [1]

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

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

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

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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  $36 \text{ cm}^2$ .

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]

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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]

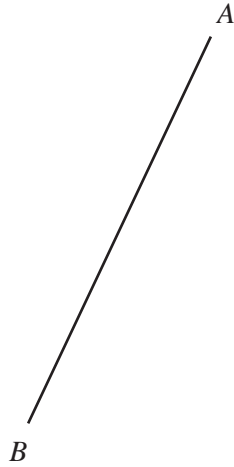
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16 Find the fraction that is half-way between  $\frac{1}{2}$  and  $\frac{2}{3}$ .

Answer ..... [2]

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- 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.

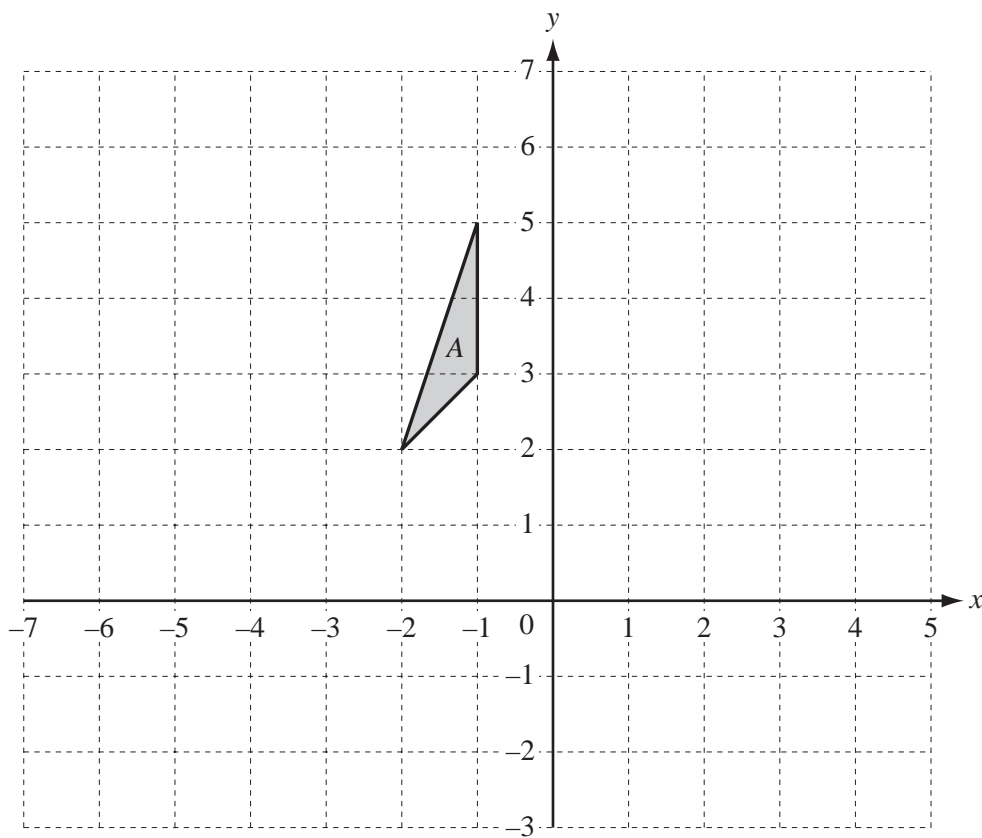
*Answer* ..... [2]

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]

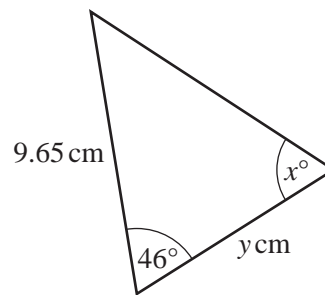
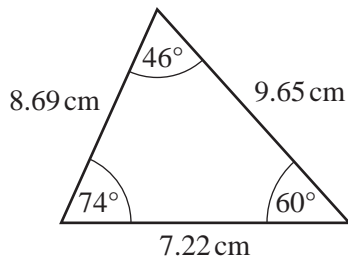
21 Each exterior angle of a regular polygon is  $30^\circ$ .

Work out the number of sides the polygon has.

Answer ..... [2]

---

22



NOT TO  
SCALE

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]

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24 Solve the simultaneous equations.

$$2x + 3y = 29$$

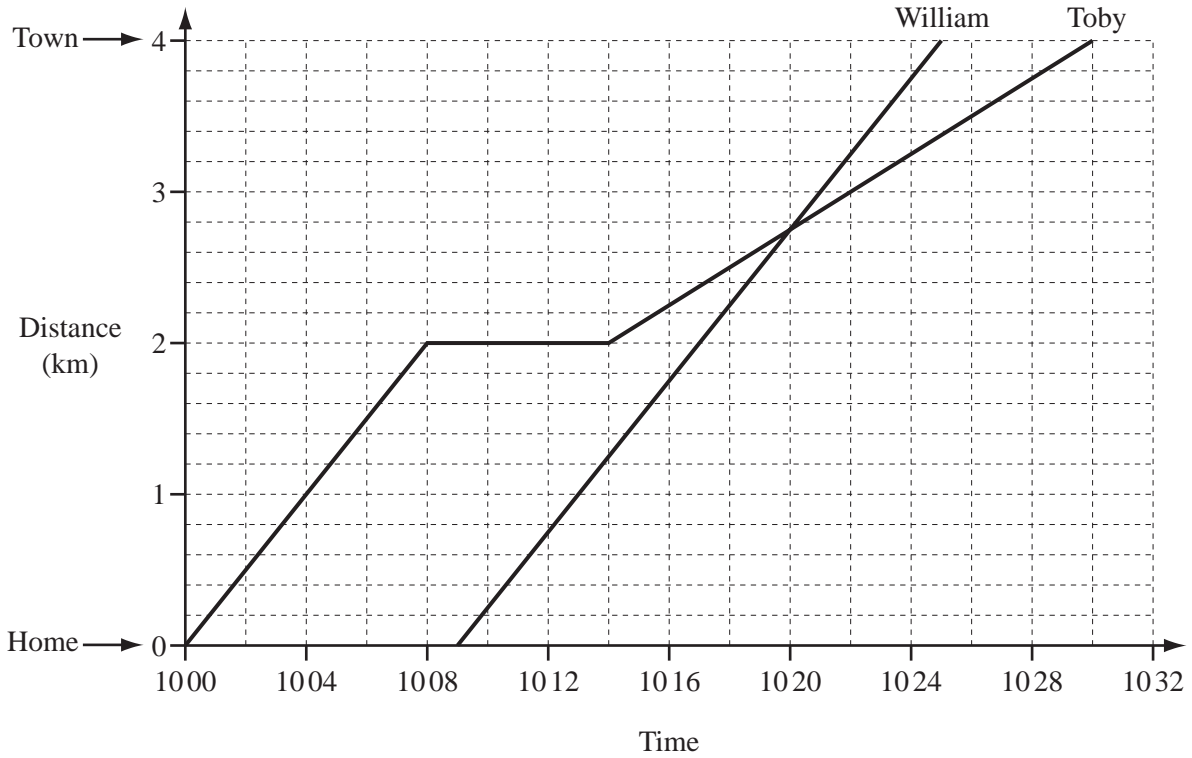
$$5x + y = 27$$

*Answer*  $x =$  .....

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

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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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