

Foundation (Grade 5) GCSE Mini Test 5

- 1** A athlete runs a distance of 1500 metres in 3 minutes and 50 seconds.

Work out the average speed of the athlete.

Give your answer, in metres per second, to 1 decimal place.

$$6.5 \text{ m/s}$$

- 2** A gold coin has a mass of 40 grams and a density of 19.3 grams/cm^3 .

Work out the volume of the gold coin.

Give your answer to one decimal place.

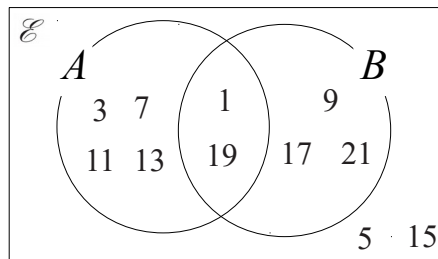
$$2.1 \text{ cm}^3$$

- 3** It costs £0.84 to buy 6 bananas.

Work out how much it would cost to buy 7 bananas.

$$£0.98$$

- 4**



$$\frac{2}{11}$$

A number is chosen at random from the universal set, \mathcal{E} . What is the probability that the number is in the set $A \cap B$?

- 5** Write 12 500 000 in standard form.

$$1.25 \times 10^7$$

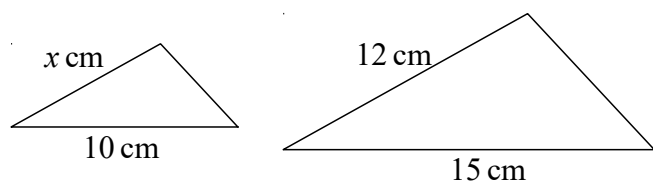
- 6** Given that $a:b = 4:3$ and $b:c = 4:1$

Find the ratio $a:b:c$

Give your answer in its simplest form.

$$16 : 12 : 3$$

- 7** The triangles are mathematically similar.



Calculate the value of x .

$$8$$

- 8** Solve the simultaneous equations:

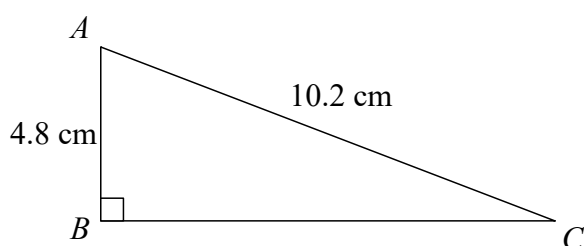
$$x + 5y = 39$$

$$4x + 3y = 20$$

$$x = -1$$

$$y = 8$$

- 9**



Calculate the length of BC .

$$9 \text{ cm}$$

- 10** Dave invests £4200 for 4 years in a savings account.

He gets 3% per annum compound interest.

How much money does Dave have at the end of 4 years.

$$£4727.14$$

11

$$a = \begin{pmatrix} 4 \\ 1 \end{pmatrix} \text{ and } b = \begin{pmatrix} 3 \\ 2 \end{pmatrix}$$

Write down as a column vector $2a - b$

$$\begin{pmatrix} 5 \\ 0 \end{pmatrix}$$

12

Bradley gets the bus on Saturday and Sunday.
The probability that Bradley's bus will be late on any day is 0.1

Work out the probability that Bradley's bus is late on at least one of these days.

$$0.19$$

13

$$m = 4n + 3p$$

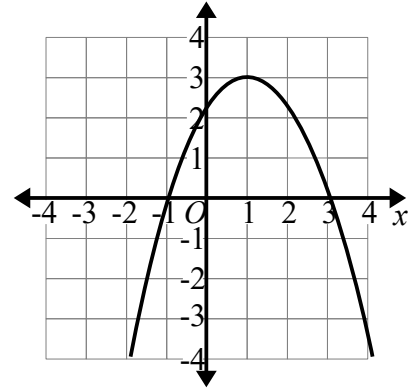
Make p the subject of the formula.

$$p = \frac{m - 4n}{3}$$

14

Write down the turning point of the graph.

$$(1, 3)$$

**15**Expand: $7x(2y - 5)$

$$14xy - 35x$$

16A straight line has equation $y = -2x - 3$

Write down the coordinates of the point where the line crosses the y axis.

$$(0, -3)$$

17

In a sale, the normal price of a book is reduced by 20%.

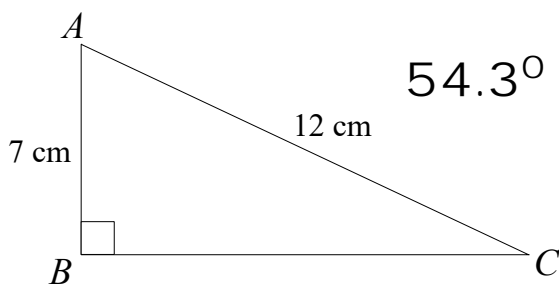
The sale price of the book is £2.80

Work out the normal price of the book.

$$£3.50$$

18Expand and simplify: $(2x + 3)(3x - 5)$

$$6x^2 - x - 15$$

19

Calculate the size of angle BAC .

20

The bearing of A from B is 090°

Find the bearing of B from A.

$$270^\circ$$