

Foundation (Grade 5) GCSE Mini Test 1

1 A car travels a distance of 250 miles in 4 hours and 20 minutes.

Work out the average speed of the car, in miles per hour.

Give your answer to 1 decimal place.

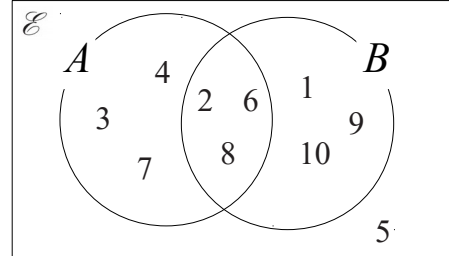
2 A rock has a mass of 114 grams and a density of 1.9 grams/cm^3 .

Work out the volume of the rock.

3 It costs £2.20 to buy 5 apples.

Work out how much it would cost to buy 8 apples.

4



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

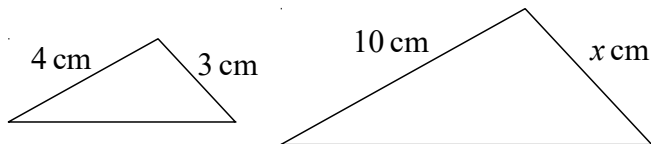
5 Work out $(7.15 \times 10^4) \div (5.5 \times 10^{-7})$
Give your answer in standard form.

6 Given that $a:b = 4:3$ and $b:c = 5:2$

Find the ratio $a:b:c$

Give your answer in its simplest form.

7 The triangles are mathematically similar.

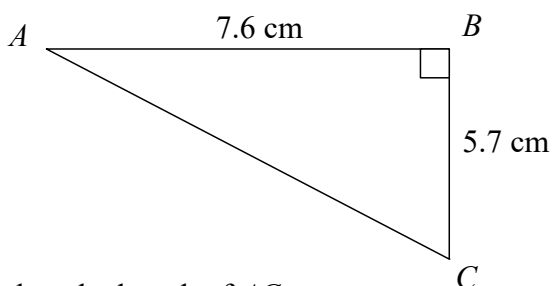


Calculate the value of x .

8 Solve the simultaneous equations:

$$\begin{aligned} 3x + y &= 11 \\ 2x - 4y &= -9 \end{aligned}$$

9



Calculate the length of AC.

10 Lottie bought a house for £350 000.

In the first year the house price increased by 2%

In the second year the house price depreciated by 5%

Work out the value of the house at the end of 2 years.

11

$$a = \begin{pmatrix} -3 \\ 5 \end{pmatrix} \text{ and } b = \begin{pmatrix} 4 \\ 2 \end{pmatrix}$$

Write down as a column vector $3a - 2b$

12

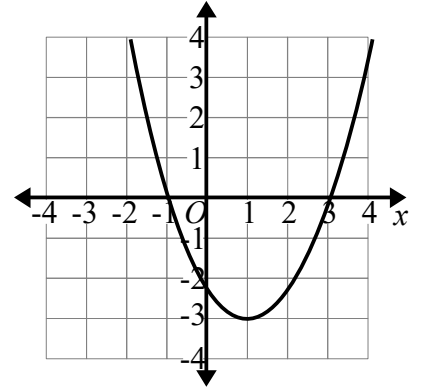
Tina has two bags of counters, Bag A and Bag B.
 There are 3 red counters and 4 blue counters in bag A.
 There are 5 red counters and 3 blue counters in bag B.
 Tina takes at random a counter from each bag.
 Draw a probability tree to represent this information.

13

Make a the subject of $v = u + at$

14

Write down the turning point of the graph

**15**

Expand and Simplify: $9(t - 2) + 3(t - 5)$

16

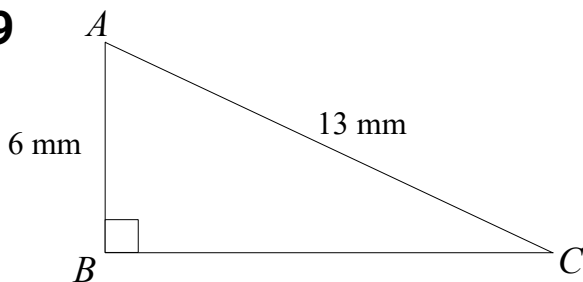
A line passes through the point $(0, 8)$.
 The gradient of this line is 3.
 Write down the equation of this line.

17

In a sale, normal prices are reduced by 25%.
 The sale price of the coat is £45
 Work out the normal price of the coat.

18

Solve: $y^2 + 2y - 35 = 0$

19

Calculate the size of angle ACB .

20

The bearing of A from B is 120°
 Find the bearing of B from A.