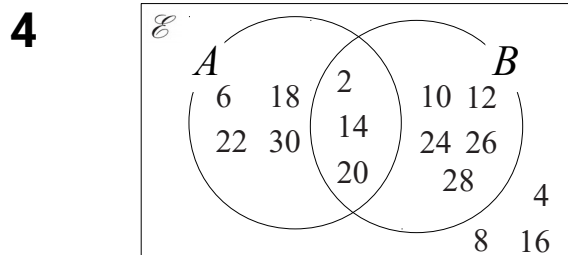


Foundation (Grade 5) GCSE Mini Test 3

1 Dani leaves her house at 08 00.
She drives 45 miles to work.
She drives at an average speed of 36 miles per hour.
At what time does Dani arrive at work?

2 Liquid A has a density of 1.2 g/cm^3
Work out the mass of 150 cm^3 of Liquid A.

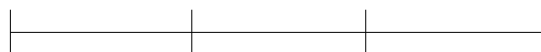
3 3 tins of beans and 4 tins of tomatoes costs £2.23
5 tins of beans costs £1.45
Work out how much one tin of tomatoes costs.



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 $\frac{1.68 \times 10^9}{2.4 \times 10^5}$
Give your answer in standard form.

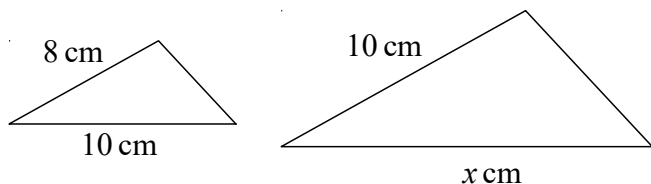
6 The points A, B, C and D lie in order on a straight line.



$$AB:BD = 5:11 \quad \text{and} \quad AC:CD = 3:1$$

Find $AB:BC:CD$

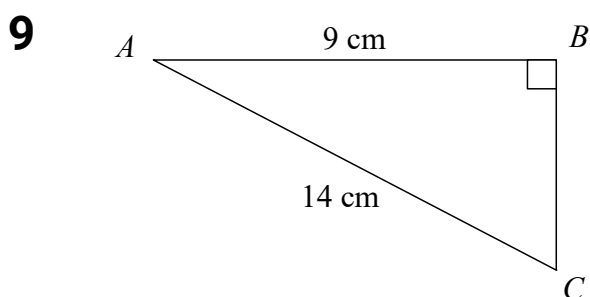
7 The triangles are mathematically similar.



Calculate the value of x .

8 Solve the simultaneous equations:

$$\begin{aligned} x - 3y &= 13 \\ 4x + y &= 13 \end{aligned}$$



Calculate the length of BC .
Give your answer correct to 1 decimal place.

10 Mark bought a house for £290 000.
In the first year the house price increased by 3%
In the second year the house price increased by 2%
Work out the value of the house at the end of 2 years.

11

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

Write down as a column vector $\mathbf{a} + 2\mathbf{b}$

12 Jo is going to play one tennis match and match of squash.

The probability she will win the tennis match is $\frac{3}{4}$

The probability she will win the squash match is $\frac{2}{5}$

Draw a probability tree to represent this information.

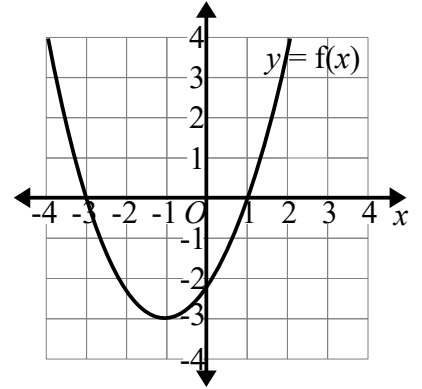
13

$$u = 7t - 15$$

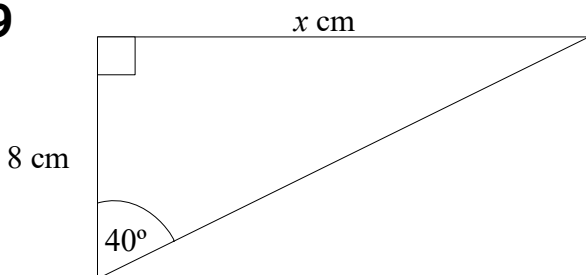
Make t the subject of the formula.

14

Write down the roots of the equation $f(x) = 0$

**15** Expand and Simplify: $4(y + 2) - 2(3y - 5)$ **16** A straight line has equation $y = 2 - 5x$

Write down the gradient of the line.

17 In a sale, normal prices are reduced by 15%.
The price of a pen is reduced by £0.90
Work out the normal price of the pen.**18** Expand and simplify: $(x + 7)(x - 7)$ **19**

Work out the value of x .

20 The bearing of A from B is 250°
Find the bearing of B from A.