

Higher (Grade 4-6) GCSE Mini Test 1

- 1** A car travels a distance of 190 miles in 4 hours and 45 minutes.

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

$$40 \text{ m/hr}$$

- 2** A rock has a mass of 126 grams and a density of 1.8 grams/cm^3 .

Work out the volume of the rock.

$$70 \text{ cm}^3$$

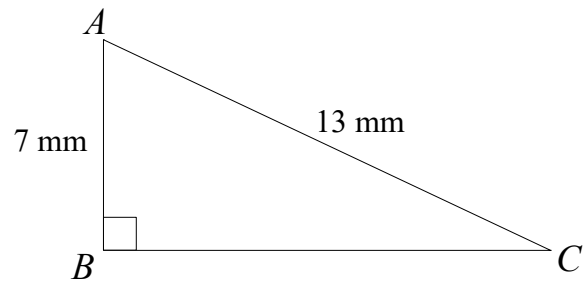
- 3** Given that $a:b = 3:4$ and $b:c = 5:2$

Find the ratio $a:b:c$

Give your answer in its simplest form.

$$15 : 20 : 8$$

- 4**



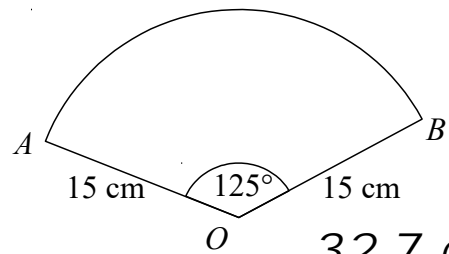
Calculate the size of angle ACB. 32.6°

- 5**

Work out $(9.35 \times 10^4) \div (5.5 \times 10^{-2})$
Give your answer in standard form.

$$1.7 \times 10^6$$

- 6**

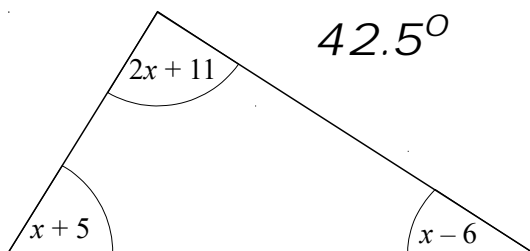


$$32.7 \text{ cm}$$

Calculate the length of the arc AB.
Give your answer correct to 3 significant figures.

- 7**

Work out the value of x .



- 8**

Molly, Paige and Demi share 56 sweets in the ratio 4 : 3 : 1

Work out the number of sweets that each of them receives.

$$28 : 21 : 7$$

- 9**

Write down the value of 4^0

$$1$$

- 10**

It costs £2.20 to buy 5 apples.

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

$$£3.52$$

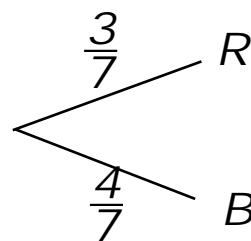
11 Solve the simultaneous equations:

$$\begin{aligned} 3x + y &= 3 \\ 2x - 4y &= 16 \end{aligned}$$

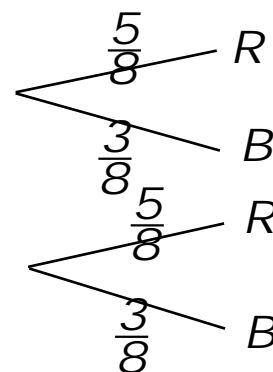
$$x = 2$$

$$y = -3$$

12 Bag A



Bag B



13 Work out the size of each interior angle in a regular hexagon

$$120^{\circ}$$

14 Find the highest common factor (HCF) of 84 and 140

$$28$$

15 Find an estimate for the mean height.

Height (cm)	Frequency
$140 < h \leq 150$	6
$150 < h \leq 160$	9
$160 < h \leq 170$	8
$170 < h \leq 180$	2

$$157.4 \text{ cm}$$

16 There are 6 starters and 7 main courses in a restaurant.

Work out the total number of ways of choosing a starter and a main course.

$$42$$

17 Find the value of $25^{\frac{3}{2}}$

$$125$$

18 Charlie invests £4000 for 3 years in a savings account.

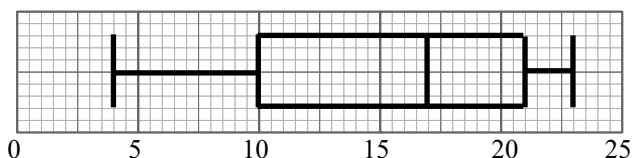
She gets 2% per annum compound interest in the first year, then $x\%$ for 2 years.

Charlie has £4228.20 at the end of 3 years, work out the value of x .

$$1.8\%$$

Minimum	Lower Quartile	Median	Upper Quartile	Maximum
4	10	17	21	23

Draw a box plot for this information.



20 28.5°

The angle at the circumference is half the angle at the centre

Find the size of angle BAC .
Give a reason for your answer.

