

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.

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

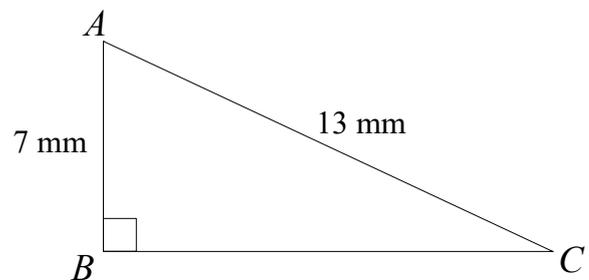
Work out the volume of the rock.

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.

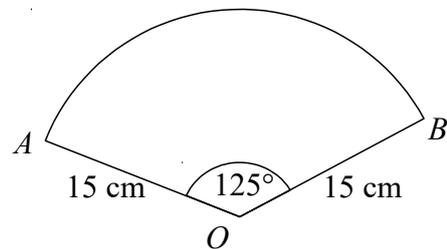
4



Calculate the size of angle ACB .

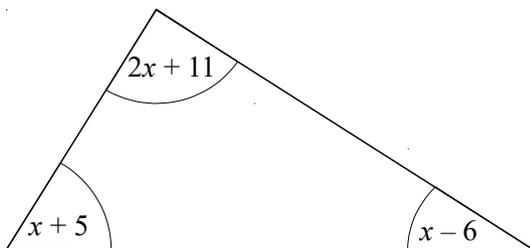
5 Work out $(9.35 \times 10^4) \div (5.5 \times 10^{-2})$
Give your answer in standard form.

6



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.

9 Write down the value of 4^0

10 It costs £2.20 to buy 5 apples.
Work out how much it would cost to buy 8 apples.

11 Solve the simultaneous equations:

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

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

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

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

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.

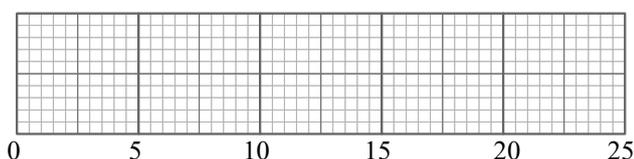
17 Find the value of $25^{\frac{3}{2}}$

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.

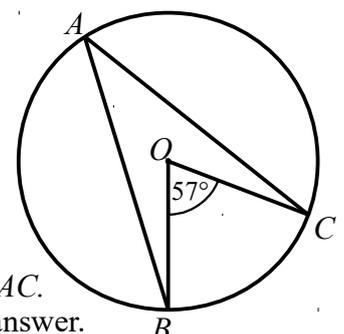
Charlie has £4228.20 at the end of 3 years, work out the value of x .

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

Draw a box plot for this information.



20



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