Day 302 **B Tier 10-a-day**

1 Write the ratio 3.5 m : 450 cm in its simplest form.

2 A sheet of card measures 12 cm by 8 cm.
A rectangle measuring 5 cm by 3 cm is cut out.
Work out the area that is left.

3 A car travels 25 km on each litre of petrol. (Calculator)
Petrol costs £1.30 per litre.
Work out the cost of the petrol for a journey of 625 km.

4 Complete the table of values for $y = x^2 + 2x - 3$

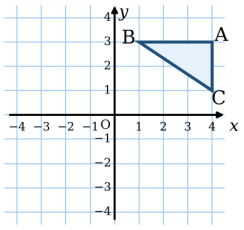
x	−2	−1	0	1	2	3
y					5	12

5 A triangular prism has a right-angled triangle as its cross-section.
The two shorter sides of the triangle are 5 m and 6 m.
The length of the prism is 4 m.
Work out the volume of the prism.

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6 $A = 3^2 \times 5$
$B = 5 \times 7^2$
Write down, as a product of prime factors,
(a) the HCF of A and B
(b) the LCM of A and B

7 The diagram shows triangle ABC on a grid.
(a) Write down the coordinates of the image of A after a reflection in the line x = 2.
(b) Write down the coordinates of the image of B after a reflection in the x-axis.



8 A cyclist travels at 50 km/h for 3 hours and then at 20 km/h for 3 hours.
Work out its average speed for the whole journey.

9 Here is a number machine.
Input → + 7 → − 8 → Output
(a) The input is 8. Work out the output.
(b) The output is 9. Work out the input.

10 Work out $2\frac{2}{3} \times 2\frac{1}{5}$
Give your answer as a mixed number.