Day 86 **B Tier 10-a-day**

1 I think of a number.
I add 9 and then multiply the result by 3.
The answer is 66.
Work out my number.

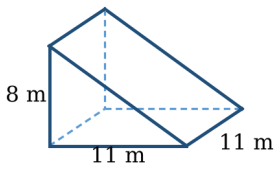
2 The table shows the probabilities of a spinner landing on each colour.
(a) Work out the value of x.
(b) The spinner is used 50 times. How many times would you expect A?

Colour	A	B	C	D
Probability	0.1	x	0.25	0.3

3 (a) The point P(4, −6) is enlarged with scale factor 2 and centre the origin. Write down the coordinates of the image.
(b) The point P(4, −6) is rotated 90° clockwise about the origin. Write down the coordinates of the image.

4 Work out
(a) $\frac{4}{9} \times \frac{3}{10}$
(b) $\frac{1}{2} \div \frac{3}{4}$
Give each answer in its simplest form.

5 A rectangle has length (2x + 7) cm and width (4x + 2) cm.
Write down an expression, in terms of x, for the perimeter of the rectangle.
Give your answer in its simplest form.

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6 The exchange rate is £1 = €1.15. (Calculator) (a) Change £500 to euros. (b) Change €80.5 to pounds (£).	
7 In a test, the mean mark of 10 boys is 80. The mean mark of 5 girls is 56. Work out the mean mark of all 15 students.	
8 The diagram shows a prism. Its cross-section is a right-angled triangle. Work out the volume of the prism. The diagram is not drawn accurately. 	
9 Solve the simultaneous equations $2x - 4y = -16$ $2x + 2y = 14$	
10 A bag contains 7 red counters and 7 blue counters. Liam takes one at random and does not replace it, then takes a second. Work out the probability that the two are different colours.	