Day 259 **B Tier 10-a-day**

1 Simplify 6a + 5b + 9a − 4b

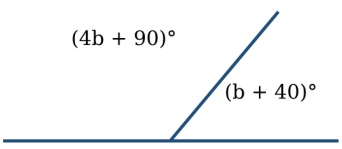
2 The table shows some information about 90 people at a meeting.
A person is chosen at random.
Find the probability that the person is in the group "Female" and chose "Tea".

	Tea	Coffee	Total
Male	27		53
Female		23	
Total			90

3 A jug holds 0.875 litres of juice.
Each glass holds 125 ml.
How many glasses can be filled from the jug?

4 I think of a number.
I divide it by 5 and then add 4.
The answer is 12.
Work out my number.

5 The diagram shows 2 angles on a straight line.
Work out the value of b.
The diagram is not drawn accurately.



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6 (a) Write $\frac{1}{16}$ as a decimal.

(b) Write $\frac{5}{12}$ as a recurring decimal.

For part (b), write down the first 8 decimal places and say which digits repeat.

7 Solve the simultaneous equations
$x + 2y = 13$
$3x + 4y = 25$

8 A car travels at 162 km/h.
Work out its speed in metres per second.

9 A cone has base radius 2 cm and vertical height 9 cm.

Volume of a cone = $\frac{1}{3}\pi r^2 h$

Work out the volume of the cone.
Give your answer in terms of π.

10 A circle has centre O and radius 17 cm.
AB is a chord and M is the midpoint of AB. OM is perpendicular to AB.
Work out the value of x.
The diagram is not drawn accurately.

