Day 228 **B Tier 10-a-day**

1 Simplify fully
(a) $5c \times 3c$
(b) $8p \times 2q$

2 A fair coin is thrown 3 times.
Each throw lands on heads or tails.
How many different sequences of heads and tails are possible?

3 Write each number as an ordinary number.
(a) 4.5×10^{3}
(b) 9×10^{-5}

4 Complete the table of values for $y = 3x - 1$

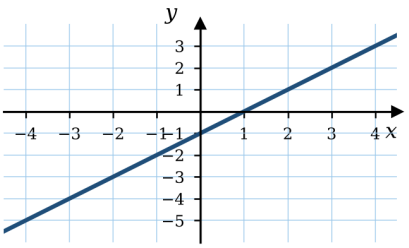
x	−2	−1	0	1	2
y			−1	2	

5 Farah invests £400 for 4 years.
The account pays 4% simple interest per year.
(a) Work out the interest earned each year.
(b) Work out the total amount in the account after 4 years.

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6 A water tank has radius 5 m and height 3 m.
Work out its volume.
Give your answer in terms of π.

7 The diagram shows a straight line.
(a) Work out the gradient of the line.
(b) Find the equation of the line.



8 There are 100 visitors.
$\frac{1}{5}$ of them are men and the rest are women.
$\frac{1}{5}$ of the men and $\frac{3}{5}$ of the women buy a drink.
One person is chosen at random. Work out the probability that they buy a drink.

9 In a sale, the price of a sofa is reduced by 10%. (Calculator)
Two weeks later it is reduced by a further 25% of the new price.
The final price is £33.75.
Work out the original price of the sofa.

10 Triangle XYZ is isosceles with XY = XZ = 14 m. (Calculator)
The base YZ = 10 m.
Work out the size of angle XYZ.
Give your answer correct to 1 decimal place.