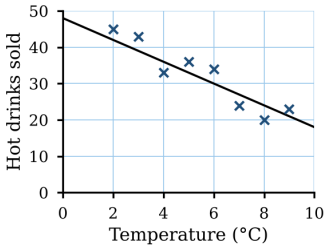
Day 3 **A Tier 10-a-day**

1 The scatter graph shows the temperature and the number of hot drinks sold on some days.
A line of best fit is drawn.
(a) Describe the correlation.
(b) Estimate the number of hot drinks sold on a day when the temperature is 8 °C.



2 Work out $(5 \times 10^{-8}) \div (2 \times 10^{-4})$
Give your answer in standard form.

3 A table exerts a force of 80 N on the floor.
The area in contact with the floor is 0.2 m^2.
Work out the pressure on the floor in N/m^2.

4 Make t the subject of $s = 3t - 2$

5 Mo reads $\frac{2}{3}$ of a book and has now read 20 pages.
How many pages does the whole book have?

Day 3	A Tier 10-a-day
6 Simplify fully $\frac{x^2 - 8x + 12}{x^2 - 9x + 14}$	
7 A rectangle measures 9 cm by 5 cm, each correct to the nearest cm. (Calculator) Work out the upper bound for the length of a diagonal of the rectangle. Give your answer to 3 significant figures.	
8 y is inversely proportional to x^2. When x = 10, y = 10. (a) Find a formula for y in terms of x. (b) Work out the value of y when x = 5.	
9 Rationalise the denominator of $\frac{38}{5 - \sqrt{6}}$ Give your answer in the form $a + b\sqrt{c}$ where a and b are integers.	
10 Ship A sails 13 km from a port on a bearing of 250°. Ship B sails 7 km from the same port on a bearing of 330°. (Calculator) Work out the distance between the two ships. Give your answer to 3 significant figures.	