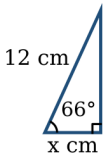
Day 222 **A Tier 10-a-day**

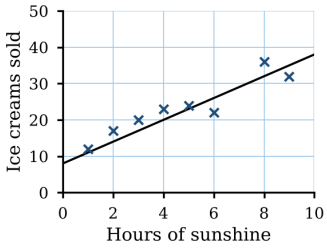
1 (a) Write 8958.6 correct to 3 significant figures.
(b) Write 29.704 correct to 2 decimal places.

2 A tank is in the shape of a cuboid measuring 50 cm by 100 cm by 60 cm.
Water flows in at 12 litres per minute until the tank is full.
Work out how long this takes. Give your answer in minutes.

3 Work out the value of x. (Calculator)
Give your answer to 3 significant figures.
The diagram is not drawn accurately.



4 The scatter graph shows the hours of sunshine and the number of ice creams sold on some days.
A line of best fit is drawn.
(a) Describe the correlation.
(b) Estimate the number of ice creams sold on a day with 6 hours of sunshine.



5 $f(x) = \frac{x + 7}{2}$

(a) Find $f^{-1}(x)$

(b) Work out $f^{-1}(-5)$

Day 222	A Tier 10-a-day
6 A flagpole stands on horizontal ground. (Calculator) From a point 25 m from the base of the flagpole, the angle of elevation of the top is 40°. Work out the height of the flagpole. Give your answer to 3 significant figures.	
7 $x_{n+1} = \sqrt[3]{17 - x_n}$ $x_0 = 2$ Work out the values of x_1, x_2 and x_3. Give your answers correct to 3 decimal places. (Calculator)	
8 Write $0.6\dot{2}$ as a fraction in its simplest form.	
9 Show that $\frac{\sqrt{72} + \sqrt{32}}{\sqrt{2}}$ is an integer, and find its value.	
10 Solve $x^2 + 6x + 7 = 0$ by completing the square. Give your answers in surd form.	