Day 99	B Tier 10-a-day

1 Work out

(a) $\sqrt[3]{27} \times 9$

(b) the square root of 81

2 Does the point $(2, -14)$ lie on the line $y = -5x - 3$?

You must show your working.

3 Sophie has £160.

They spends $\frac{3}{4}$ of the money on a book.

They then spends $\frac{1}{2}$ of the money left on a drink.

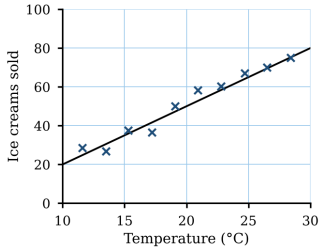
How much money is left?

4 The scatter graph shows information about temperature and ice creams sold.

A line of best fit is drawn.

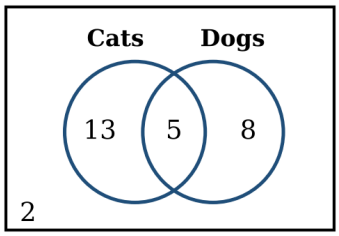
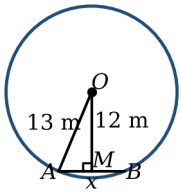
(a) Describe the correlation.

(b) Use the line of best fit to estimate the ice creams sold when temperature is 19.



5 (a) The point $P(-3, -4)$ is translated by the vector $\begin{pmatrix} -3 \\ 0 \end{pmatrix}$. Write down the coordinates of the image.

(b) The point $P(-3, -4)$ is reflected in the line $y = x$. Write down the coordinates of the image.

Day 99	B Tier 10-a-day
6 The Venn diagram shows information about 28 people in a street. One of them is chosen at random. Find the probability that the person chose Cats or Dogs or both.  	
7 Solve $x^2 - 16 = 0$	
8 The length of a rectangle is 24 cm and its width is 10 cm. Both measurements are correct to the nearest cm. Work out the lower bound for the area of the rectangle.	
9 A circle has centre O and radius 13 m. 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.  	
10 A can has radius 7 cm and height 5 cm. It is open at one end (no lid). Work out the total outside surface area. Give your answer in terms of π.	