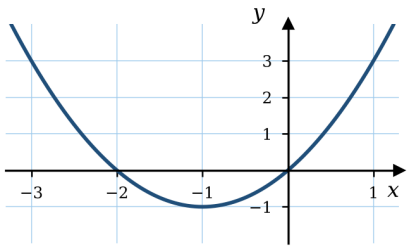
Day 143	B Tier 10-a-day
1 Here are four digit cards. 3 4 2 8 Use all four cards to make the largest possible even number.	
2 The ratio of boys to girls among the students in a class is 2 : 3. There are 16 boys. How many girls are there?	
3 I think of a number. I divide it by 3 and then add 1. The answer is 3. Work out my number.	
4 A is the point (2, 2) and B is the point $(-2, -1)$. (a) Work out the coordinates of the midpoint of AB. (b) Work out the length of AB.	
5 Work out (a) 5^{-1} (b) $7^0 + \sqrt{9}$	

Day 143 **B Tier 10-a-day**

6 A kite is flown on a string 25 m long.
The kite is directly above a point 7 m from the person flying it, on level ground.
Work out the height of the kite above the ground, ignoring the height of the person.

7 The diagram shows the graph of
$y = x^2 + 2x$
(a) Write down the solutions of $x^2 + 2x = 0$
(b) Write down the coordinates of the minimum point of the graph.



8 Pasta is sold in two sizes.
Small: 500 g for £1.70
Large: 750 g for £2.92
Which size is better value for money?
You must show your working.

9 A paddling pool is $\frac{1}{4}$ full.
10 litres of water are added.
The paddling pool is now $\frac{1}{2}$ full.
Work out the capacity of the paddling pool.

10 A circle has centre O and radius 15 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.

