Day 341	B Tier 10-a-day
1 Work out (a) $\sqrt[3]{343} \times 12$ (b) the square root of 144	
2 (a) Convert 3500 ml to litres. (b) Convert 800 mm^2 to cm^2.	
3 Factorise $10x - 6$	
4 3 bottles of water cost £2.70. Work out the cost of 8 bottles of water.	
5 (a) Write $\frac{31}{40}$ as a decimal. (b) Write $\frac{7}{12}$ as a recurring decimal. For part (b), write down the first 8 decimal places and say which digits repeat.	

Day 341	B Tier 10-a-day
6 Town A has a population of 3,000. Its area is 12 km^2. Work out the population density. Give your answer in people per km^2.	
7 The area of a circle is 145 m^2. (Calculator) Work out the radius of the circle. Give your answer correct to 1 decimal place.	
8 There are 8.5×10^5 fish in a lake. The number triples every day. How many are there after 4 days? Give your answer in standard form.	
9 There are 200 students. $\frac{1}{5}$ of them are boys and the rest are girls. $\frac{1}{5}$ of the boys and $\frac{3}{5}$ of the girls walk to school. One person is chosen at random. Work out the probability that they walk to school.	
10 A rectangle has length $(x + 6)$ cm and width $(x - 2)$ cm. The area of the rectangle is 20 cm^2. (a) Show that $x^2 + 4x - 32 = 0$ (b) Hence work out the length of the rectangle.	