Day 344	B Tier 10-a-day
1 Here is a list of numbers. 71, 93, 14, 80, 50, 41, 62, 24 From the list, write down (a) a multiple of 7 (b) an odd number that is not prime	
2 The ratio of cats to dogs among the pets at a rescue centre is 9 : 7. There are 36 cats. How many dogs are there?	
3 PQRS is a parallelogram. Angle SPQ = 50°. (a) Write down the size of angle QRS. (b) Work out the size of angle PQR.	
4 Work out (a) 0.095 ÷ 0.05 (b) 19 ÷ 0.5	
5 A bar of lead has a mass of 904 g and a volume of 80 cm^3. Work out its density. Give your answer in g/cm^3.	

Day 344	B Tier 10-a-day
6 $g(x) = 3x^2 + 1$ (a) Work out g(3) (b) Work out g(−1)	
7 A tower is 17 m tall. (Calculator) Mia stands 29 m from the base of the tower on level ground. Work out the angle of elevation of the top of the tower from Mia. Give your answer correct to 1 decimal place.	
8 Village C has a population density of 150 people per km^2. Its area is 10 km^2. Work out its population.	
9 Work out the gradient of the straight line that passes through the points (−4, 4) and (−1, 3).	
10 A rectangle has length (x + 4) cm and width (x − 1) cm. The area of the rectangle is 14 cm^2. (a) Show that $x^2 + 3x - 18 = 0$ (b) Hence work out the length of the rectangle.	