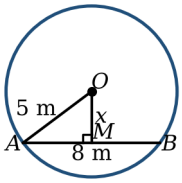
Day 55	B Tier 10-a-day
1 Expand and simplify $6(x + 3) + 2(x - 3)$	
2 Work out (a) $\frac{1}{4} + \frac{3}{10}$ (b) $\frac{7}{10} - \frac{1}{6}$ Give each answer in its simplest form.	
3 The scale of a map is 1 : 100,000. Two villages are 6 km apart. How far apart are they on the map? Give your answer in centimetres.	
4 Write each answer as a single power of 3. (a) $3^6 \times 3^6$ (b) $3^{12} \div 3^6$	
5 On a map, 1 cm represents 25 km. Two towns are 7.5 cm apart on the map. (a) Work out the real distance between the towns. (b) Write the scale of the map in the form 1 : n.	

Day 55	B Tier 10-a-day
6 Solve $14 - 2x = x + 11$	
7 £800 is invested for 2 years at 5% compound interest per year. (Calculator) Work out the total interest earned.	
8 A circle has centre O and radius 5 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. 	
9 A straight line has equation $y = -2x + 10$ (a) Write down the coordinates of the point where the line crosses the y-axis. (b) Work out the coordinates of the point where the line crosses the x-axis.	
10 A bag contains 3 red counters and 2 blue counters. Maya takes one at random, replaces it, then takes a second. Work out the probability that the two are the same colour.	