Day 354	B Tier 10-a-day
1 Write each number in standard form. (a) 43,000 (b) 0.0000088	
2 Here are the temperatures at noon in a town. 28, 10, 16, 32, 15, 18, 5, 7 (a) Find the median. (b) Work out the range.	
3 A photographer charges £9 plus £4 for each hour of a wedding. (a) Work out the total cost for 4 hours. (b) The total cost is £69. Work out the number of hours.	
4 Two fair dice, numbered 1 to 4 and 1 to 4, are rolled. Work out the probability that the product of the two scores is odd.	
5 $\mathbf{a} = \begin{pmatrix} -6 \\ 7 \end{pmatrix}$ $\mathbf{b} = \begin{pmatrix} -1 \\ -3 \end{pmatrix}$ Work out (a) $3\mathbf{a} + \mathbf{b}$ (b) $4\mathbf{a} + \mathbf{b}$	

Day 354	B Tier 10-a-day
6 Work out (a) 4^{-3} (b) $7^0 + \sqrt{81}$	
7 An isosceles triangle has two equal sides of length (2x + 4) m and a third side of length (2x) m. The perimeter of the triangle is 44 m. Work out the value of x.	
8 A water tank is $\frac{1}{2}$ full. 42 litres of water are added. The water tank is now $\frac{4}{5}$ full. Work out the capacity of the water tank.	
9 A coach travels at 30 km/h for 1.5 hours and then at 90 km/h for 1.5 hours. Work out its average speed for the whole journey.	
10 Show that (n + 9)(n + 3) − n(n + 12) has the same value for every whole number n.	