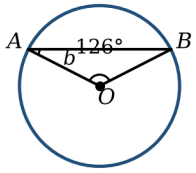
Day 65	B Tier 10-a-day
1 A and B are points on a circle, centre O. Angle AOB = 126°. Work out the size of angle b. Give a reason for your answer. The diagram is not drawn accurately. 	
2 Simplify fully (a) $(2p^3)^2$ (b) $(y^3)^4$	
3 Work out (a) 5.5 × 0.8 (b) 0.2 × 7	
4 Two straight paths meet at a point X. A point P is always the same distance from both paths. Describe the locus of the point P.	
5 Two fair spinners, numbered 1 to 6 and 1 to 10, are spun. Work out the probability that the difference between the two scores is 3.	

Day 65	B Tier 10-a-day
6 A straight line has equation $y = -6x + 9$ (a) Write down the gradient of the line. (b) Write down the equation of a line that is parallel to this line and passes through the point $(0, -6)$.	
7 There are 200 bus passengers. $\frac{1}{10}$ of them are adults and the rest are children. $\frac{2}{5}$ of the adults and $\frac{2}{5}$ of the children have a pass. One person is chosen at random. Work out the probability that they have a pass.	
8 Show that $(2n + 6)^2 - 36$ is a multiple of 4 for any whole number n.	
9 There are 5.6×10^5 fish in a lake. The number doubles every day. How many are there after 4 days? Give your answer in standard form.	
10 A motorbike travels at 9 km/h. Work out its speed in metres per second.	