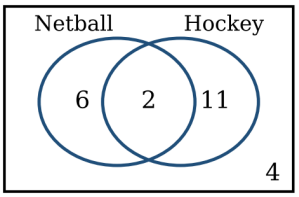
Day 113	A Tier 10-a-day
1 Work out the value of $3x^2 + 2x + 4$ when $x = -6$	
2 A train travels at 4 m/s. Work out this speed in kilometres per hour.	
3 Express 242 as a product of prime factors. Give your answer in index form.	
4 Simplify fully (a) $\frac{16x^4y^6}{3xy^2}$ (b) $(3x^3y^2)^4$	
5 The Venn diagram shows information about 23 people. One person is chosen at random. (a) The person is in set Netball. Find the probability that they are also in set Hockey. (b) The person is not in set Hockey. Find the probability that they are in set Netball. 	

Day 113	A Tier 10-a-day
6 A flagpole stands on horizontal ground. (Calculator) From a point 25 m from the base of the flagpole, the angle of elevation of the top is 25°. Work out the height of the flagpole. Give your answer to 3 significant figures.	
7 A swimming pool holds 17.5 m^3 of water. How many litres is this?	
8 (a) Work out $\sqrt{900}$ (b) Work out $\sqrt[3]{27000}$	
9 x = 30 is rounded to 1 significant figure. Write down the error interval for x.	
10 A, B, C and D are points on a circle. AC and BD meet at E. Angle BAC = 47° and angle ACD = 33°. Work out the size of angle x (angle AEB). Give reasons for your working. 