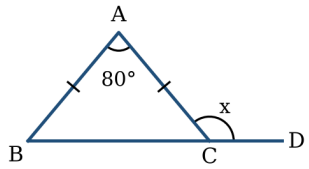
Day 184	A Tier 10-a-day
1 (a) Write down all the prime numbers between 50 and 70. (b) Write 119 as the product of two prime numbers.	
2 ABC is an isosceles triangle with AB = AC. BCD is a straight line. Angle BAC = 80°. Work out the size of angle x. The diagram is not drawn accurately. 	
3 (a) Write 50 and 55 as products of prime factors. (b) Find the highest common factor (HCF) and the lowest common multiple (LCM) of 50 and 55.	
4 A bag contains 2 red and 7 blue counters. Two counters are taken at random without replacement. Work out the probability that the two counters are different colours.	
5 The curve C has equation $y = -x^2 + 25$ (a) Find the coordinates of the points where C crosses the x-axis. (b) Find the coordinates of the turning point of C.	

Day 184	A Tier 10-a-day
6 The price of a ticket is increased by 20% and then the new amount is decreased by 40%. Work out the overall percentage decrease.	
7 Write as a single fraction in its simplest form $\frac{x+1}{3} + \frac{x-6}{4}$	
8 A tree stands on horizontal ground. (Calculator) From a point 85 m from the base of the tree, the angle of elevation of the top is 29°. Work out the height of the tree. Give your answer to 3 significant figures.	
9 Jug A contains 36 litres of a mixture of concentrate and water in the ratio 7 : 5. Jug B contains 20 litres of a mixture of concentrate and water in the ratio 3 : 7. The contents of both jugs are mixed together. Work out the ratio of concentrate to water in the mixture. Give your answer in its simplest form.	
10 Work out the size of angle x. (Calculator) Give your answer to 1 decimal place. The diagram is not drawn accurately. 