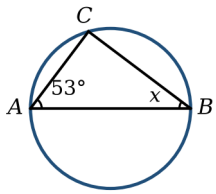
Day 10	B Tier 10-a-day
1 $A = 2^3 \times 7^2$ $B = 2^3 \times 5^2 \times 7$ Write down, as a product of prime factors, (a) the HCF of A and B (b) the LCM of A and B	
2 Leah is n years old. Leah's sister is 4 years older. Leah's father is 3 times as old as Leah. (a) Write an expression, in terms of n, for the age of Leah's sister. (b) Write an expression, in terms of n, for the sum of the ages of all three people. Give your answer in its simplest form.	
3 In a survey, 5 people chose water. There were 90 people in the survey altogether. The results are shown in a pie chart. Work out the angle for water.	
4 Amir has £225. They spends $\frac{2}{3}$ of the money on a book. They then spends $\frac{2}{3}$ of the money left on a drink. How much money is left?	
5 The angles of a triangle are x°, 2x° and (2x + 15)°. Work out the size of the largest angle.	

Day 10	B Tier 10-a-day
6 A, B and C are points on a circle. AB is a diameter of the circle. Angle CAB = 53°. Work out the size of angle x. Give a reason for each step of your working. The diagram is not drawn accurately.  	
7 Work out (a) 3^{-2} (b) $2^0 + \sqrt{100}$	
8 $y = 2x^2 + 5x - 4$ Work out the value of y when x = 4	
9 A tin has radius 6 m and height 7 m. It is closed. Work out the total outside surface area. Give your answer in terms of π.	
10 A cyclist travels at 30 km/h for 1 hour and then at 60 km/h for 2 hours. Work out its average speed for the whole journey.	