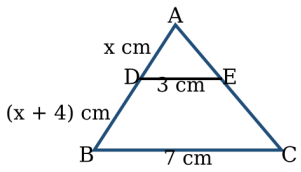
Day 106	S Tier 10-a-day
1 The sum of the interior angles of a polygon is 2700°. Work out the number of sides of the polygon.	
2 Amir invests £12,000 for 5 years at 1.5% per year simple interest. Ravi invests £12,000 for 5 years at 1.5% per year compound interest. Work out how much more interest Ravi earns than Amir. Give your answer to the nearest penny. (Calculator)	
3 In the diagram, DE is parallel to BC. AD = x cm, DB = (x + 4) cm, DE = 3 cm and BC = 7 cm. (a) Find the value of x. (b) Work out the length of AB. The diagram is not drawn accurately. 	
4 Write $\sqrt{20} + \sqrt{80} - \sqrt{5}$ in the form $a\sqrt{5}$ where a is an integer.	
5 The mean of 11 numbers is 16. One number is removed and the mean of the remaining 10 numbers is 13.9. Work out the number that was removed.	

Day 106	S Tier 10-a-day
6 A and B are points on the curve $y = 3x^2 - 5x + 3$. The x coordinate of A is 0 and the x coordinate of B is 4. Work out the gradient of the line AB.	
7 The graph of y = f(x) has a minimum point at (−3, −3). Write down the coordinates of the turning point of the graph of (a) y = f(x) − 3 (b) y = f(x − 1) − 5	
8 Make r the subject of P(r + 3) = r − P	
9 A population is increased by x% in one year and then increased by a further x% the next year. Over the two years the population increases by 21%. Work out the value of x.	
10 The Venn diagram shows how many of 41 students study French (F) or Spanish (S). (a) Work out the value of x. (b) A student is chosen at random from those who study Spanish. Work out the probability that this student also studies French. 