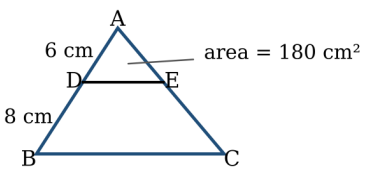
Day 330	S Tier 10-a-day
1 The width of a table is 24,100 cm, correct to 3 significant figures. Write down the error interval for the width of a table, using w.	
2 20 painters can paint a hall in 8 days. After 5 days, 5 of the painters leave. The rest carry on working at the same rate. How many more days does it take to finish?	
3 Work out $(3.8 \times 10^{-5}) \times (1.3 \times 10^{-6})$ Give your answer in standard form.	
4 Here are the first five terms of a quadratic sequence. 0, 1, −2, −9, −20 Find an expression for the nth term.	
5 In the diagram, DE is parallel to BC. AD = 6 cm, DB = 8 cm and the area of triangle ADE is 180 cm^2. Work out the area of the trapezium DBCE. The diagram is not drawn accurately. 	

Day 330	S Tier 10-a-day
6 Ravi invests £10,000 for 3 years at 4.5% per year simple interest. Sofia invests £10,000 for 3 years at 4.5% per year compound interest. Work out how much more interest Sofia earns than Ravi. Give your answer to the nearest penny. (Calculator)	
7 A is the point $(4, -5)$ and B is the point $(12, -7)$. Find an equation of the perpendicular bisector of AB. Give your answer in the form $ax + by = c$, where a, b and c are integers.	
8 Simplify fully $\frac{x^2 - 6x - 7}{x^2 + 3x} \times \frac{x^2 + 4x}{x - 7}$	
9 A spinner numbered 1 to 4 and a spinner numbered 1 to 5 are each thrown once. The first score and the second score are recorded. (a) Work out the probability that the product is greater than 8. (b) Given that the first number is greater than the second, work out the probability that the product is greater than 8.	
10 Show that the equation $x^2 + kx - 3 = 0$ has two distinct real solutions for all values of k.	