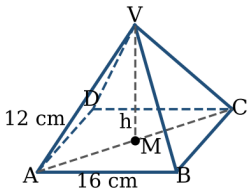
Day 50	IGCSE 10-a-day
1 Work out the exact value of $4 \cos 60° \times \cos 60°$. Give your answer in its simplest form, with no decimals.	
2 Each interior angle of a regular polygon is 150°. Work out the number of sides of the polygon.	
3 Solve $4 \cos x° - 2 = 2$ for $0 \leq x \leq 360$	
4 $y = -2x^3 - 3x^2 - 6$ Use the second derivative to show that the curve has a maximum at $x = 0$.	
5 Given that $\sqrt{72} - \sqrt{2} = \sqrt{n}$, find the value of n.	

Day 50	IGCSE 10-a-day
6 T is inversely proportional to n. When n = 4, T = 5. Find the positive value of n when T = 4.	
7 £10,000 is invested at 4% per year compound interest. Work out the least whole number of years after which the investment is worth more than £12,500. (Calculator)	
8 $f(x) = 3x^2 + 12x - 2$ Use differentiation to find the coordinates of the turning point of the graph of y = f(x). State whether it is a maximum or a minimum.	
9 VABCD is a pyramid on a square base. V is directly above the centre M. (a) Work out the height VM of the pyramid. (b) Work out the volume of the pyramid. The diagram is not drawn accurately. 	
10 The normal to the curve $y = x^2 + 2x + 3$ at the point P where x = 0 meets the curve again at Q. Find the coordinates of Q.	