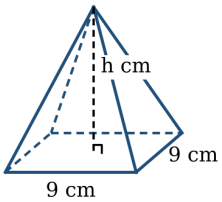
Day 203	A Tier 10-a-day
1 Convert 250000 cm^2 into m^2.	
2 The number of visitors to a museum changes from 500 to 400. Work out the percentage decrease.	
3 The diagram shows a pyramid with a square base of side 9 cm. The volume of the pyramid is 270 cm^3. Work out the perpendicular height, h, of the pyramid. The diagram is not drawn accurately. 	
4 Work out $(5 \times 10^{-6})^2$ Give your answer in standard form.	
5 $\mathbf{u} = \begin{pmatrix} -12 \\ 5 \end{pmatrix}$. Work out the magnitude (length) of $\mathbf{u}$.	

Day 203	A Tier 10-a-day
6 Work out $4\frac{5}{7} \times 2\frac{1}{2}$ Give your answer as a mixed number in its simplest form.	
7 The point P(−3, 4) lies on a circle with centre O(0, 0). (a) Work out the equation of the circle, in the form $x^2 + y^2 = r^2$. (b) Find the equation of the tangent to the circle at P.	
8 y is directly proportional to the square root of x. When x = 25, y = 25. (a) Find a formula for y in terms of x. (b) Work out the positive value of x when y = 5.	
9 Rationalise the denominator of $\frac{20}{4 - \sqrt{6}}$ Give your answer in the form $a + b\sqrt{c}$ where a and b are integers.	
10 A is the point (−7, 1) and B is the point (1, 5). Find the equation of the perpendicular bisector of AB.	