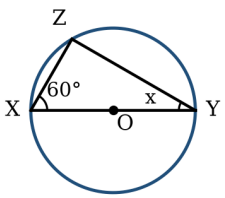
Day 269	A Tier 10-a-day
1 $s = ut + \frac{1}{2}at^2$ Work out the value of s when $u = -3$, $a = 4$ and $t = 2$	
2 £1 = $1.12. (a) Change £160 to dollars. (b) Change $268.8 to pounds.	
3 Factorise $x^2 - 4x + 3$	
4 XY is a diameter of the circle. Angle YXZ = 60°. Work out the size of angle x. Give a reason for each step of your working. 	
5 Chloe invests £6,500 in a bank account. (Calculator) The account pays compound interest at 5% per year. Work out the value of the investment after 4 years.	

Day 269	A Tier 10-a-day
6 A tank is in the shape of a cuboid measuring 100 cm by 50 cm by 150 cm. It already contains 20 litres of water. Water flows in at 10 litres per minute until the tank is full. Work out how long this takes. Give your answer in minutes.	
7 A triangle has base 31 cm and perpendicular height 20 cm. Each measurement is correct to the nearest cm. Work out the upper bound for the area of the triangle.	
8 A sphere has radius 9 cm. Work out the surface area of the sphere. Give your answer in terms of π.	
9 $f(x) = 3x + 2$ $g(x) = x^2 + 2$ (a) Find f(2) (b) Find fg(x). Give your answer in its simplest form.	
10 A cyclist travels 600 metres in 5.4 seconds. The distance is correct to the nearest 10 metres and the time to the nearest 0.1 second. (a) Work out the upper bound and the lower bound of the speed in m/s. (b) Write the speed to a suitable degree of accuracy. Give a reason for your answer.	