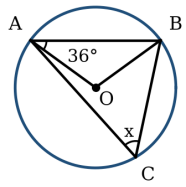
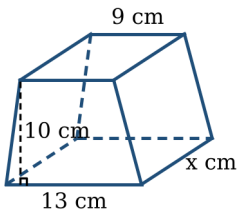
Day 76	A Tier 10-a-day
1 Here are the first four terms of a sequence. 17, 14, 11, 8 (a) Find an expression for the nth term. (b) Find the first term in the sequence that is less than -100.	
2 Here are the ingredients for 6 muffins. Sugar: 90 g Oats: 150 g Flour: 180 g (a) Work out how much sugar is needed for 30 muffins. (b) Hannah has 324 g of oats. What is the greatest number of muffins she can make?	
3 Two similar bottles have heights 12 cm and 18 cm. The surface area of the smaller one is 32 cm^2. Work out the surface area of the larger one.	
4 Leah buys a bike for £320 and sells it for £352. Work out Leah's percentage profit.	
5 An isosceles triangle has two equal sides of length (2x + 10) cm and (x + 20) cm. The third side is 6 cm. Work out the perimeter of the triangle.	

Day 76	A Tier 10-a-day
6 Ravi invests £1000 in a savings account. (Calculator) The account pays 8% compound interest per year. Work out the interest earned in 3 years.	
7 A, B and C are points on a circle with centre O. Angle OAB = 36°. (a) Work out angle AOB. (b) Work out the size of angle x. Give reasons for your answers. 	
8 n is the smallest positive integer such that 441 × n is a cube number. Find the value of n.	
9 The diagram shows a prism with a trapezium as its cross-section. The volume of the prism is 1870 cm^3. Work out the value of x. The diagram is not drawn accurately. 	
10 Chloe invests £4,500 in a savings account. (Calculator) Compound interest is paid at a fixed rate each year. After 2 years the investment is worth £5,445. Work out the annual rate of interest.	