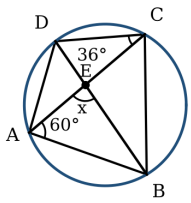
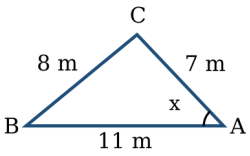
Day 47	A Tier 10-a-day
1 Solve $6(x + 7) = 2(x + 8) + 10$	
2 The scale of a map is 1 : 10000. A road is 0.3 km long. Work out the length of the road on the map, in centimetres.	
3 Solve $-5x - 9 \geq -x - 25$	
4 A bar of soap has a volume of 290 cm^3. The density of the material is 7.8 g/cm^3. Work out the mass of the bar of soap.	
5 Light travels at 3×10^5 kilometres per second. The Sun is 9.3×10^7 kilometres from Earth. Work out how many seconds light takes to travel from the Sun to Earth. Give your answer in standard form.	

Day 47	A Tier 10-a-day
6 A, B, C and D are points on a circle. AC and BD meet at E. Angle BAC = 60° and angle ACD = 36°. Work out the size of angle x (angle AEB). Give reasons for your working. 	
7 f(x) = 4x + 7 $g(x) = x^2 + 3$ Solve gf(x) = 28	
8 Work out the size of angle x. (Calculator) Give your answer to 1 decimal place. The diagram is not drawn accurately. 	
9 Rationalise the denominator of $\frac{57}{5+\sqrt{6}}$ Give your answer in the form $a + b\sqrt{c}$ where a and b are integers.	
10 Dev and Owen each invest £1000 for 2 years. (Calculator) Dev's account pays 5% simple interest per year. Owen's account pays 5% compound interest per year. Work out how much more interest Owen earns than Dev.	