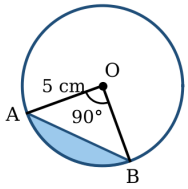
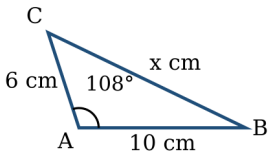
Day 336	A Tier 10-a-day
1 The diagram shows a circle with centre O and radius 5 cm. Angle AOB = 90°. (Calculator) Work out the area of the shaded segment. Give your answer to 3 significant figures.  	
2 Make r the subject of $k = \frac{r + 5}{4}$	
3 On a stage, a lighthouse flashes every 14 seconds. A blue beacon flashes every 10 seconds. They flash together at the start. After how many seconds will they next flash together?	
4 y is directly proportional to the cube of x. When x = 2, y = 32. (a) Find a formula for y in terms of x. (b) Work out the value of y when x = 7.	
5 Isla buys a sofa for £200 and sells it making a profit of 25%. Work out the selling price.	

Day 336	A Tier 10-a-day
6 $f(x) = 5x + 6$ $g(x) = x^2 + 2$ (a) Find g(1) (b) Find gf(x). Expand and simplify your answer.	
7 The mean age of 6 workers is 40 years. One of them, aged 62, leaves. Work out the mean age of the remaining workers.	
8 The value of a car falls by 20% each year. (Calculator) After 3 years it is worth £19,200. Work out its value at the start.	
9 Work out the value of x. (Calculator) Give your answer to 3 significant figures. The diagram is not drawn accurately. 	
10 $p : q = 4 : 3$ $q : r = 6 : 7$ (a) Work out the ratio p : q : r (b) p, q and r add up to 126. Work out the value of r.	