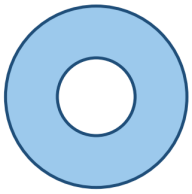
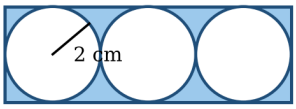
Day 167	A Tier 10-a-day
1 Here are the ages, in years, of 7 people. 20 74 66 50 67 47 42 (a) Work out the median. (b) Work out the interquartile range.	
2 Express 2156 as a product of prime factors. Give your answer in index form.	
3 The diagram shows the cross-section of a metal pipe. The outer radius is 7 cm and the inner radius is 3 cm. The pipe is 40 cm long. Work out the volume of metal used. Give your answer in terms of π. 	
4 By rounding each number to 1 significant figure, estimate the value of $\frac{78.0 \times 50}{0.45}$	
5 Solve $x^2 = 6x - 5$	

Day 167	A Tier 10-a-day
6 3 identical circles of radius 2 cm fit exactly inside a rectangle. The circles touch each other and the sides of the rectangle. (Calculator) Work out the area of the shaded region. Give your answer to 3 significant figures.  	
7 n is the smallest positive integer such that 30 × n is a square number. Find the value of n.	
8 Tom is x years old. His dad is 3 times as old as Tom, plus 2 years. The sum of their ages is 30 years. Work out how old his dad is.	
9 y is inversely proportional to x^2. When x = 8, y = 8. (a) Find a formula for y in terms of x. (b) Work out the value of y when x = 2.	
10 Solve the simultaneous equations $x^2 + y^2 = 25$ $y = -x - 7$	