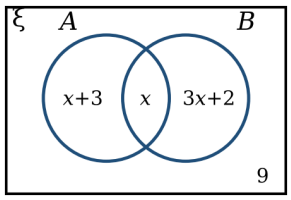
Day 37	IGCSE 10-a-day
1 (a) Solve $4 - 5x \leq -1$ (b) n is an integer. Write down all the values of n that satisfy $-15 < 3n - 3 < 6$	
2 The equation of a curve is $y = -3x^2 + \frac{4}{x}$. Work out the gradient of the curve at the point where $x = -2$.	
3 The sum of the squares of two consecutive positive integers is 41. Let the smaller integer be n. (a) Show that $n^2 + n - 20 = 0$ (b) Work out the two integers.	
4 $y = x + \frac{4}{x}$ Find the coordinates of the stationary points and determine whether each is a maximum or a minimum.	
5 In a group of students, 60% are boys and the rest are girls. 45% of the boys and 25% of the girls walk to school. What percentage of all the students walk to school?	

Day 37	IGCSE 10-a-day
6 A curve has equation $y = 3x^2 - 3x + 5$. Find the equation of the normal to the curve at the point where $x = 0$.	
7 The Venn diagram shows information about 44 pupils. A: walk to school B: cycle to school (a) Find the value of x. (b) Find n(A) and n(B ∩ A′). 	
8 A metal pipe is a hollow cylinder with outer radius 10 cm and inner radius 9.5 cm. (Calculator) The density of the metal is 7.8 g/cm^3. The mass of the pipe is 7.17 kg. Work out the length of the pipe. Give your answer in centimetres correct to 3 significant figures.	
9 A rectangle has area 39 cm^2, correct to 2 significant figures. Its length is 8.800000000000000710542735760100185871124267578125 cm, correct to 2 significant figures. Work out the upper bound of the width of the rectangle. Give your answer correct to 3 significant figures. (Calculator)	
10 A bag contains some sweets. 3 of them are red and the rest are yellow. Two sweets are taken at random without replacement. The probability that both are red is $\frac{3}{28}$. Work out how many sweets are yellow.	