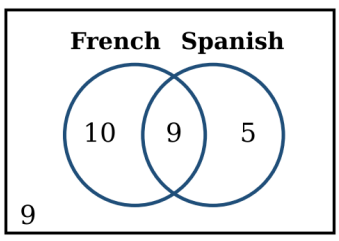
Day 195	B Tier 10-a-day
1 Expand and simplify $2(x + 2) + 5(x - 1)$	
2 $A = 2^3 \times 3^3$ $B = 3^3 \times 7^2$ Write down, as a product of prime factors, (a) the HCF of A and B (b) the LCM of A and B	
3 Cereal is sold in two sizes. Small: 500 g for £2.05 Large: 750 g for £3.52 Which size is better value for money? You must show your working.	
4 A straight line has equation $y = x - 4$ (a) Write down the coordinates of the point where the line crosses the y-axis. (b) Work out the coordinates of the point where the line crosses the x-axis.	
5 The Venn diagram shows information about 33 pupils in Year 9. One of them is chosen at random. Find the probability that the person chose both French and Spanish.  	

Day 195	B Tier 10-a-day
6 Two lights flash at 07:45. One light flashes every 30 minutes. The other light flashes every 15 minutes. At what time do both lights next flash together?	
7 Triangle PQR is isosceles with PQ = PR = 5 m. The base QR = 6 m. (a) Work out the perpendicular height of the triangle. (b) Work out the area of the triangle.	
8 The length of a pencil is 10.23 cm, correct to 2 decimal places. Write down the error interval for the length. Use the letter L.	
9 Show that $(2n + 7)^2 - (2n - 7)^2$ is a multiple of 56 for any whole number n.	
10 A boat sails 12 km on a bearing of 180° from P to Q, then 5 km on a bearing of 270° to R. (Calculator) (a) Work out the distance PR. (b) Work out the bearing of R from P. Give your answers correct to 1 decimal place. 