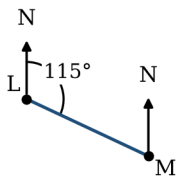
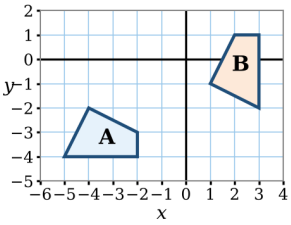
Day 118	A Tier 10-a-day
1 The bearing of M from L is 115°. Work out the bearing of L from M. The diagram is not drawn accurately.  	
2 A straight line has equation $3x + 2y = 6$ (a) Find the gradient of the line. (b) Find the coordinates of the point where the line crosses the x-axis.	
3 Change 4000 cm^2 to m^2.	
4 Write the recurring decimal $0.\dot{7}\dot{6}$ as a fraction in its simplest form.	
5 The population of a village is decreased by 25%. The new population is then decreased by 10%. Work out the overall percentage change.	

Day 118	A Tier 10-a-day
6 (a) Show that $0.\dot{8}\dot{5} = \frac{85}{99}$ (b) Hence write $5.\dot{8}\dot{5}$ as a mixed number in its simplest form.	
7 y is directly proportional to the cube of x. When x = 2, y = 48. (a) Find a formula for y in terms of x. (b) Work out the positive value of x when y = 750.	
8 The point P(−15, 8) lies on a circle with centre O(0, 0). (a) Work out the equation of the circle, in the form $x^2 + y^2 = r^2$. (b) Find the equation of the tangent to the circle at P.	
9 Describe fully the single transformation that maps shape A onto shape B. 	
10 Solve the simultaneous equations $y = x^2 - 6x + 18$ $y = x + 8$	