Day 365	B Tier 10-a-day
1 Here are the amounts needed to make pancakes for 6 people. 450 ml of milk, 60 g of sugar Work out the amounts needed to make pancakes for 15 people.	
2 Work out (a) 9.7 × 0.6 (b) 0.17 × 4	
3 $\mathbf{a} = \begin{pmatrix} 7 \\ 6 \end{pmatrix}$ $\mathbf{b} = \begin{pmatrix} 3 \\ 2 \end{pmatrix}$ Work out (a) $2\mathbf{a} - \mathbf{b}$ (b) $2\mathbf{a} - 3\mathbf{b}$	
4 Solve $\frac{3x + 17}{4} = 5$	
5 (a) The point P(−12, −10) is enlarged with scale factor ½ and centre the origin. Write down the coordinates of the image. (b) The point P(−6, −5) is rotated 180° about the origin. Write down the coordinates of the image.	

Day 365	B Tier 10-a-day
6 The scale of a map is 1 : 20,000. Two towns are 7.5 cm apart on the map. Work out the real distance between the towns. Give your answer in kilometres.	
7 A badge is made from a rectangle and a semicircle. (Calculator) The rectangle is 16 cm wide and 12 cm high. The diameter of the semicircle is 16 cm. (a) Work out the area of the shape. (b) Work out the perimeter of the shape. Give each answer correct to 1 decimal place.	
8 Solve $16 - 2x = 3x - 14$	
9 The number x is rounded to the nearest 100. The result is 6100. Write down the error interval for x.	
10 A rectangle has length $(x + 6)$ cm and width $(x - 1)$ cm. The area of the rectangle is 60 cm^2. (a) Show that $x^2 + 5x - 66 = 0$ (b) Hence work out the length of the rectangle.	