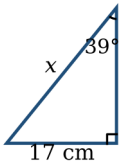
Day 180	B Tier 10-a-day
1 Triangle XYZ is isosceles with XY = XZ. Angle XYZ = 47°. Work out the size of angle YXZ.	
2 Leah buys 4 pens at £1.95 each and 2 sandwiches at £1.75 each. She pays with a £20 note. Work out how much change she gets.	
3 Expand (a) $8(2x - 1)$ (b) $3x(x - 6)$	
4 The probability that a machine makes a faulty part is 0.3. Work out how many times you would expect this to happen in 400 parts made.	
5 $\mathbf{a} = \begin{pmatrix} 7 \\ 1 \end{pmatrix}$ $\mathbf{b} = \begin{pmatrix} -1 \\ -3 \end{pmatrix}$ Work out (a) $3\mathbf{a} + \mathbf{b}$ (b) $3\mathbf{a} - \mathbf{b}$	

Day 180	B Tier 10-a-day
6 Two fair dice, numbered 1 to 6 and 1 to 10, are rolled. Work out the probability that both dice show the same number.	
7 Work out (a) $\frac{3}{4} \times \frac{2}{5}$ (b) $\frac{1}{8} \div \frac{1}{2}$ Give each answer in its simplest form.	
8 Work out the length of x. (Calculator) Give your answer correct to 1 decimal place. The diagram is not drawn accurately. 	
9 Here is an iteration formula. $x_{n+1} = 4 + \frac{10}{x_n}$ $x_0 = 2$ (a) Work out x_1 (b) Work out x_2. Give your answer correct to 3 decimal places. (Calculator)	
10 Factorise $y^2 - 144$	