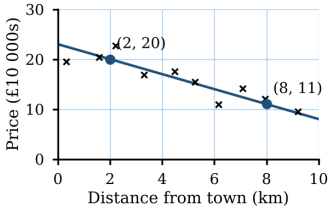
Day 25	S Tier 10-a-day
1 B is 10% more than D. D is 5% more than P. Work out B as a percentage of P.	
2 The mean of 7 numbers is 153. One number is removed and the mean of the remaining 6 numbers is 174. Work out the number that was removed.	
3 Solve $\frac{x+1}{2} + \frac{x-7}{6} = 2$	
4 The scatter graph shows distance from town (x) and price (y). The equation of the line of best fit is $y = -1.5x + 23$. (a) Estimate y when x = 7. (b) Explain why an estimate of y when x = 20 may be unreliable. 	
5 $\mathbf{a} = \begin{pmatrix} 3 \\ -4 \end{pmatrix}$, $\mathbf{b} = \begin{pmatrix} -1 \\ 1 \end{pmatrix}$ and $\mathbf{c} = \begin{pmatrix} 2 \\ 1 \end{pmatrix}$ $\mathbf{a} + k\mathbf{b}$ is parallel to $\mathbf{c}$. Work out the value of k.	

Day 25	S Tier 10-a-day
6 Solve the simultaneous equations $6x + 4y = -38$ $2x - 5y = 19$	
7 In a group of employees, 55% are men and the rest are women. 40% of the men and 25% of the women work from home. What percentage of all the employees work from home?	
8 (a) Write 252 and 1008 as products of prime factors. (b) Find the HCF and the LCM of 252 and 1008. Give your answers as numbers.	
9 A bag contains 5 yellow beads and 4 white beads. Two beads are taken at random without replacement. Work out the probability that (a) both are the same colour, (b) exactly one is white.	
10 The diagram shows triangle ABC. (Calculator) (a) Work out the length of AB, marked x, to 1 decimal place. (b) Work out the area of triangle ABC to 3 significant figures. The diagram is not drawn accurately. 