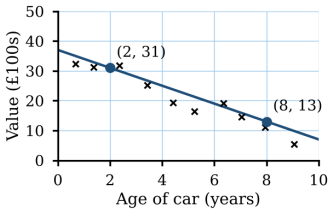
Day 6	IGCSE 10-a-day
1 Solve $2 \tan x + 5 = 0$ for $0° \leq x \leq 360°$. (Calculator) Give your answers correct to 1 decimal place.	
2 Describe fully the single transformation that maps the graph of $y = f(x)$ onto the graph of (a) $y = f(x) + 1$ (b) $y = -f(x)$	
3 The scatter graph shows age of car (x) and value (y). The equation of the line of best fit is $y = -3x + 37$. (a) Estimate y when x = 3. (b) Explain why an estimate of y when x = 25 may be unreliable. 	
4 (a) Write $x^2 + 6x + 8$ in the form $(x + p)^2 + q$ (b) Write down the coordinates of the turning point of the curve $y = x^2 + 6x + 8$	
5 $f(x) = x^3 - 12x + 2$ Find the y coordinate of the local maximum point and the y coordinate of the local minimum point.	

Day 6	IGCSE 10-a-day
6 Points A and B are on level ground, 77 m apart, with B between A and the foot of a tower. The angle of elevation of the top of the tower is 43° from A and 61° from B. Work out the height of the tower. Give your answer to 3 significant figures. (Calculator)	
7 The tangent at the point P on the curve $y = -x^2 - 3x + 5$ is perpendicular to the line $x - 7y = 6$. Find the coordinates of P.	
8 The HCF of two numbers is 9 and their LCM is 270. One of the numbers is 27. Work out the other number.	
9 The tangent to the curve $y = x^3 + 2x^2 - 2$ at the point P where $x = -2$ meets the curve again at Q. Find the coordinates of Q.	
10 Simplify fully $\frac{x^2 - 36}{x^2 - 3x} \div \frac{x^2 - 8x + 12}{x}$	