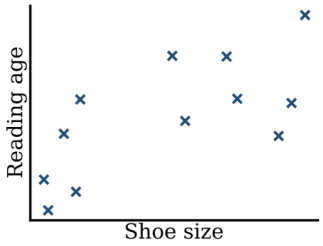
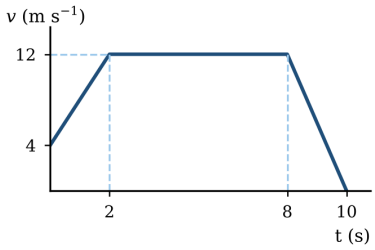
Day 327	A Level Maths: C Tier 10-a-day
1 The scatter diagram shows shoe size and reading age for a group. Describe the correlation.  	
2 Sketch $y = \|2x + 9\|$. Write down the coordinates of the vertex and of the point where the graph meets the y-axis.	
3 The side x cm of a cube increases at 0.25 cm/s. Find the rate of increase of the volume when $x = 2$.	
4 $X \sim B(13, 0.5)$. Find $P(X \leq 6)$, giving your answer to 3 s.f.	
5 A curve has parametric equations $x = 3t$, $y = \frac{1}{t}$, $t \neq 0$. Find a Cartesian equation of the curve.	

Day 327 **A Level Maths: C Tier 10-a-day**

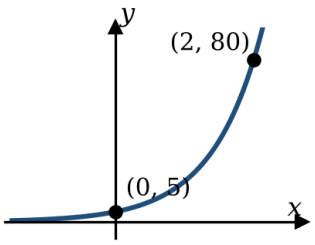
6 The graph shows the velocity of a skater.
(a) Find the acceleration in the first 2 s.
(b) Find the deceleration in the last 2 s.
(c) Find the total distance travelled.



7 Solve $\sin x = \frac{1}{2}$ for $0 \leq x \leq 2\pi$.
Give your answers in terms of π.

8 A particle moves in a straight line with velocity $v = (9t^2 + 6t + 3)$ m s^{-1} at time t seconds.
Find the distance travelled between t = 2 and t = 4 (the particle does not turn round).

9 The diagram shows the curve $y = ab^x$, where $b > 0$.
Find the values of a and b.



10 A car is worth £$V = 12000 \times 0.9^t$ after t years.
Find (a) its value after 4 years, (b) when it is worth £6000.
Give answers to 3 s.f.