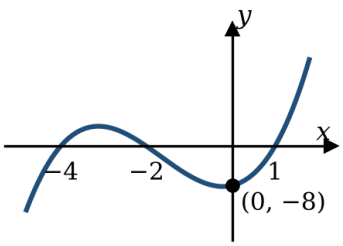
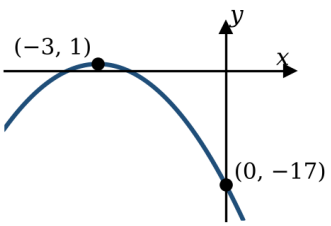
Day 331	A Level Maths: C Tier 10-a-day
1 Solve $25^x = 15625$.	
2 A car of mass 1500 kg is driven along a straight horizontal road by a driving force of 1150 N against a constant resistance of 400 N. Find the acceleration of the car.	
3 Solve $\log_x 256 = 4$.	
4 The diagram shows the curve y = f(x), where f(x) is a cubic. Find f(x) in the form k(x − a)(x − b)(x − c). 	
5 $x = 2t^2 + 3$, $y = 3t^3 - t$. Find dy/dx in terms of t, and its value when t = 1.	

Day 331	A Level Maths: C Tier 10-a-day
6 A particle moves in a straight line. Its velocity at time t seconds ($0 \leq t \leq 2$) is $v = (-3t^2 + 6t)$ m s^{-1}. Find the maximum velocity and the time at which it occurs.	
7 Seeds are planted one at a time until one grows, with probability 0.3333333333 each time. X is the number planted. Find P(X = 3), to 3 s.f.	
8 The diagram shows a sketch of a quadratic curve. Find its equation in the form $y = a(x - p)^2 + q$. 	
9 X ~ B(50, 0.25). Use a normal approximation to find $P(X \leq 14)$, to 3 s.f.	
10 Solve (a) $e^x = 50$ (b) $\ln x = 1.5$ Give answers to 3 significant figures.	