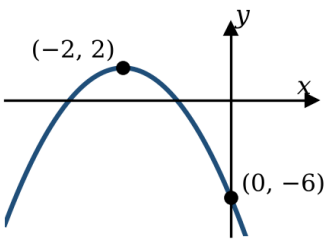
Day 358	A Level Maths: C Tier 10-a-day
1 A horizontal force of 15 N acts on a trolley of mass 2 kg on a smooth horizontal surface. Find the acceleration.	
2 A sector has radius 6 cm and area 13.5 cm^2. Find the angle of the sector in radians and the arc length.	
3 The curve C has equation $y = x^3 + 2x + 1$. C is reflected in the x-axis. Find the equation of the image, in the form y = ...	
4 Of 60 people, 33 are girls. 17 of the girls and 11 of the boys own a bike. One person is chosen at random. Given that the person is a girl, find the probability that they own a bike.	
5 A particle moving in a straight line with constant acceleration 0.5 m s^{-2} travels 27 m in 6 s. Find its initial speed.	

Day 358	A Level Maths: C Tier 10-a-day
6 A population is N(μ, 5^2). H_0: μ = 165, H_1: μ > 165. A sample of 25 has mean $\bar{x}$ = 168.4. Test at the 5% level. Critical value: z = 1.645.	
7 A car is worth £V = 15000 × 0.75^t after t years. Find (a) its value after 5 years, (b) when it is worth £7500. Give answers 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 f(x) = 8 sin x + 6 cos x + 4. Write f(x) in the form R sin(x + α) + 4, with α in degrees to 1 d.p., and state the maximum value of f(x).	
10 The line y = 3x + k is a tangent to the curve $y = x^2 + 5x - 2$. Find the value of k.	