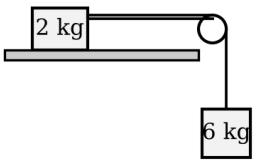
Day 234	A Level Maths: C Tier 10-a-day
1 An arithmetic sequence begins 6, 4, 2, 0, ... Find (a) an expression for the nth term, (b) the 24th term.	
2 Solve $e^{2x+1} = 3$. Give your answer to 3 significant figures.	
3 Describe the single transformation that maps the graph of y = f(x) onto the graph of y = f(6x).	
4 X ~ B(6, 0.2). Find P(X ≥ 1), giving your answer to 3 s.f.	
5 The curve $y = 5x - x^2$ and the line y = 3x meet at the origin and at P. Find the area enclosed between them.	

Day 234	A Level Maths: C Tier 10-a-day
6 A lift of mass 500 kg is raised by a vertical cable with constant acceleration 0.5 m s^{-2} upwards. Take g = 9.8 m s^{-2}. Find the tension in the cable.	
7 P(A) = 0.3, P(B) = 0.2 and P(A ∩ B) = 0.01. (a) Find P(A | B). (b) Are A and B independent? Give a reason.	
8 A 2 kg particle on a smooth horizontal table is joined by a light string over a smooth pulley to a hanging 6 kg particle, as shown. The system is released from rest. Take g = 9.8 m s^{-2}. Find the tension.  	
9 A(0, 2), B(12, −2) and C(21, −5). Show that A, B and C are collinear and find AB : BC.	
10 The point P(−4, −3) lies on the curve y = f(x). Write down the coordinates of the image of P on (a) y = f(−x) (b) y = 2f(x)	