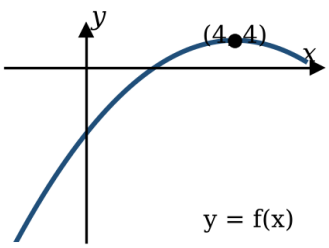
Day 335	A Level Maths: C Tier 10-a-day
1 $X \sim N(30, 10^2)$ and $P(30 < X < 50) = 0.025$. Find $P(X > 50)$.	
2 Solve $\tan x = \sqrt{3}$ for $0° \leq x \leq 360°$.	
3 A brick is dropped from rest from the top of a bridge of height 44.1 m. Take $g = 9.8$ m s^{-2} and ignore air resistance. Find (a) the time taken to reach the ground, (b) its speed on hitting the ground.	
4 The diagram shows the curve $y = f(x)$. The maximum point is shown. Write down the coordinates of the maximum point on the curve with equation (a) $y = f(x - 1)$ (b) $y = 2f(x)$ 	
5 $X \sim B(n, p)$ has mean 2 and variance 1.5. Find n and p.	

Day 335	A Level Maths: C Tier 10-a-day
6 Solve $-2\sin^2 x + \cos x + 1 = 0$ for $0° \leq x \leq 360°$.	
7 A circle has equation $(x + 1)^2 + (y + 4)^2 = 25$. Determine whether the point P(5, −5) is inside, outside or on the circle.	
8 Two cyclists start at the same time from points A and B, 126 m apart, and cycle directly towards each other at constant speeds of 6 m s^{-1} and 3 m s^{-1}. Find the time until they meet.	
9 A sequence is defined by $u_{n+1} = 4u_n - 5$, $u_1 = 1$. Find u_2, u_3 and u_4.	
10 $f(x) = 5 \sin x + 12 \cos x + 6$. Write f(x) in the form $R \sin(x + \alpha) + 6$, with α in degrees to 1 d.p., and state the maximum value of f(x).	