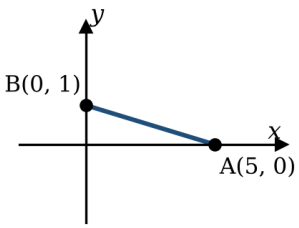
Day 361	A Level Maths: C Tier 10-a-day
1 Write $\sqrt{250}$ in the form $p\sqrt{q}$, where q is an integer as small as possible.	
2 Solve $\log_{10} x = 3$.	
3 The diagram shows a line meeting the axes at A and B. Find (a) the equation of AB in the form $px + qy = r$ with integers p, q and r, (b) the length AB. 	
4 A and B are mutually exclusive, with P(A) = 0.3 and P(B) = 0.5. (a) Find $P(A \cup B)$. (b) Find the probability that neither A nor B happens.	
5 A car's engine works at a constant rate of 12 kW. Find the driving force when the vehicle is moving at 15 m s^{-1}.	

Day 361	A Level Maths: C Tier 10-a-day
6 $X \sim N(145, 6^2)$. Given that $P(X > a) = 0.8$, find a to 3 s.f.	
7 A is $(0, -2)$ and B is $(4, 0)$. Find the equation of the perpendicular bisector of AB, in the form $ax + by = c$ with integer a, b and c.	
8 Solve $\cos(x - 40°) = -\frac{\sqrt{3}}{2}$ for $0° \leq x \leq 360°$.	
9 A skier starts from rest and moves in a straight line with constant acceleration 1.5 m s^{-2}. It travels 3 m. Find the time taken.	
10 $\frac{-4x - 10}{(x + 2)(x + 3)} \equiv \frac{A}{x + 2} + \frac{B}{x + 3}$. Find A and B, and hence find $\int \frac{-4x - 10}{(x + 2)(x + 3)}\, dx$.	