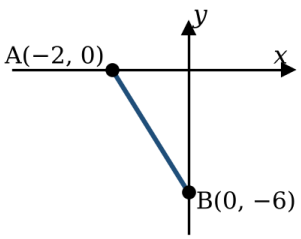
Day 122	A Level Maths: C Tier 10-a-day
1 The heights in cm for two groups: Group A has mean 56, standard deviation 7; Group B has mean 62, standard deviation 4. Compare the two sets of data.	
2 A particle moves in a straight line with velocity v = $(9t^2 - 2t + 8)$ m s^{-1} at time t seconds. Find the distance travelled between t = 3 and t = 6 (the particle does not turn round).	
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 The curve $y = ab^x$ passes through (0, 3) and (2, 48). Find the values of a and b.	
5 Seven daily rainfall readings (mm) from the Large Data Set are: 0.6, tr, 2.2, 2.8, 1.2, 3.2, tr. Here 'tr' means a trace, which is treated as 0. Find the mean daily rainfall to 3 s.f.	

Day 122	A Level Maths: C Tier 10-a-day
6 Find the coefficient of x^2 in the expansion of $(3 - 3x)^8$.	
7 Solve $-6\sin^2 x + 3\cos x + 6 = 0$ for $0° \leq x \leq 360°$.	
8 The circle $(x - 2)^2 + y^2 = 25$ passes through P(5, −4). Find the gradient of the tangent to the circle at P.	
9 A sector has radius 6 cm and arc length 3.00 cm. Find the angle of the sector in radians and the area of the sector.	
10 A particle is in equilibrium under the three forces shown. $\cos \alpha = \frac{5}{13}$. Find P and Q. 