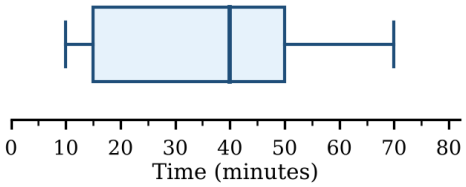
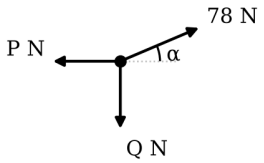
Day 77	A Level Maths: C Tier 10-a-day
1 The volume of a sphere increases at 50 cm^3/s. Find the rate of increase of the radius when r = 4. Give your answer to 3 s.f.	
2 Expand and simplify $(1 + \sqrt{5})(1 - \sqrt{5})$.	
3 The box plot summarises the delivery times, in minutes, of a pizza company. Find the range and the interquartile range. 	
4 Differentiate y = 2 tan x with respect to x.	
5 Find the remainder when $3x^3 + 2x^2 + 6x - 4$ is divided by $(3x - 5)$.	

Day 77	A Level Maths: C Tier 10-a-day
6 A particle is in equilibrium under the three forces shown. $\cos\alpha = \frac{12}{13}$. Find P and Q. 	
7 The table shows values of y = f(x). x: 1 2 3 4 5 6 y: 5.3 7.7 6.8 6 4.6 5.4 Use the trapezium rule to estimate the area under the curve between x = 1 and x = 6.	
8 A particle of mass 10 kg is released from rest and falls 19.6 m. Take g = 9.8 m s^{-2}. Use energy to find (a) the loss in potential energy (3 s.f.), (b) the speed of the particle after falling 19.6 m.	
9 X ~ B(120, 0.2). Use a normal approximation to find P(X ≤ 28), to 3 s.f.	
10 Solve $\|x - 6\| < 3$.	