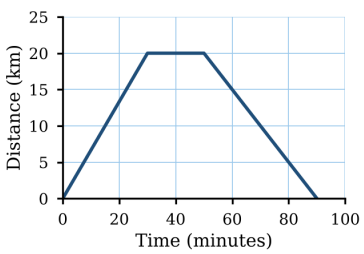
Day 39	A Tier 10-a-day
1 Work out the value of $4a^2 + 3ab - b^2$ when $a = -2$ and $b = 4$	
2 (a) Write 24 and 44 as products of prime factors. (b) Find the highest common factor (HCF) and the lowest common multiple (LCM) of 24 and 44.	
3 A rectangular table top is 200 cm by 100 cm. Work out its area in m^2.	
4 Solve the simultaneous equations $6x + 2y = -26$ $4x - 3y = -13$	
5 The graph shows the distance travelled by a motorcyclist. (a) For how many minutes did the motorcyclist stop? (b) Work out the speed during the final part of the journey. Give your answer in km/h. 	

Day 39	A Tier 10-a-day
6 Work out $(1.2 \times 10^2) + (5.5 \times 10^1)$ Give your answer in standard form.	
7 The mean of 6 numbers is 39. Another number is added. The mean of the 7 numbers is now 43. Work out the number that was added.	
8 The population of Island M is 3×10^7. The population of Island N is 1.5×10^7. How many times bigger is the population of Island M than the population of Island N?	
9 Here are the first five terms of a quadratic sequence. $-5, 1, 13, 31, 55$ (a) Find an expression for the nth term. (b) Work out the 20th term.	
10 A, B, C and D are points on a circle. AC and BD meet at E. Angle BAC = 39° and angle ACD = 48°. Work out the size of angle x (angle AEB). Give reasons for your working. 