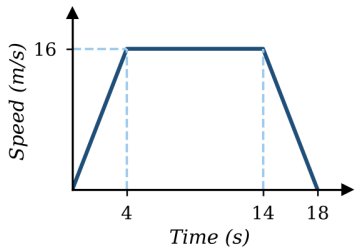
Day 255	S Tier 10-a-day
1 ABC is an isosceles triangle with AB = AC. Angle BAC = (2x + 20)° Angle ABC = (x + 34)° (a) Work out the value of x. (b) Work out the size of angle BAC.	
2 Write $\sqrt{48} + \sqrt{3} - \sqrt{12}$ in the form $a\sqrt{3}$ where a is an integer.	
3 (a) Write $x^2 - 2x + 9$ in the form $(x + p)^2 + q$ (b) Write down the coordinates of the turning point of the curve $y = x^2 - 2x + 9$	
4 Work out $3\frac{2}{5} \times 2\frac{1}{2} - 4\frac{3}{4}$ Give your answer as a mixed number or a fraction in its simplest form.	
5 Triangle ABC has AB = 7 cm and BC = 14 cm. The area of triangle ABC is $\frac{49\sqrt{2}}{2}$ cm^2. Angle ABC is acute. Work out the size of angle ABC. Do not use a calculator.	

Day 255	S Tier 10-a-day
6 A bag contains 5 orange beads and 3 purple beads. Two beads are taken at random without replacement. Work out the probability that (a) both are the same colour, (b) they are different colours.	
7 The graph shows the speed of a train between two stations. (a) Work out the acceleration in the first 4 seconds. (b) Work out the total distance. 	
8 The price of a watch is increased by 40%. Later the new price is reduced by 25% in a sale. The sale price is £252. Work out the price before the increase. (Calculator)	
9 Factorise fully $2x^2 - 10x + 8$	
10 Rationalise the denominator of $\frac{26}{3\sqrt{6}}$ Give your answer in its simplest form.	