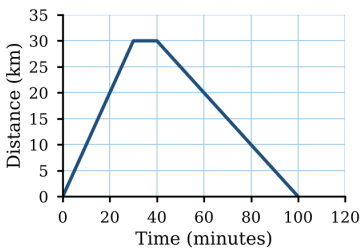
Day 26	A Tier 10-a-day
1 Write these numbers in order of size, starting with the smallest. $\frac{3}{5}$ 64% 40% 0.17	
2 The scale of a map is 1 : 20000. Two towns are 1.5 cm apart on the map. Work out the real distance between the towns in kilometres.	
3 Triangle DEF: angle E = 50°, angle F = 45°, EF = 11 cm. Triangle PQR: angle Q = 45°, angle R = 50°, QR = 11 cm. Are the two triangles congruent? Give a reason for your answer.	
4 Simplify fully (a) $\frac{16x^6y^6}{5x^2y^3}$ (b) $(3x^2y^2)^2$	
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. 	

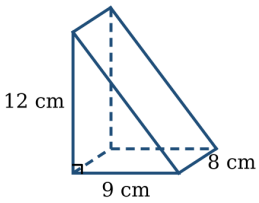
Day 26 **A Tier 10-a-day**

6 Write the recurring decimal $0.\dot{2}\dot{4}$ as a fraction in its simplest form.

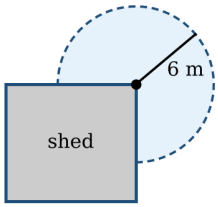
7 (a) Show that the equation $x^3 + 4x - 26 = 0$ can be rearranged to give $x = \frac{26 - x^3}{4}$

(b) Show that the equation has a solution between x = 2 and x = 3

8 The diagram shows a triangular prism.
The cross-section is a right-angled triangle.
Work out the total surface area of the prism.
The diagram is not drawn accurately.



9 A dog is tied by a rope of length 6 m to the corner of a rectangular shed.
The shed measures 10 m by 9 m.
The dog can graze on any grass it can reach outside the shed.
Work out the area it can graze. Give your answer in terms of π.
The diagram is not drawn accurately.



10 Make x the subject of $y = \frac{5x - 2}{3x + 1}$