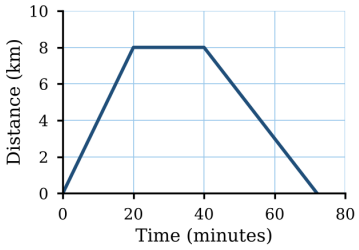
Day 276 **A Tier 10-a-day**

1 A cyclist makes a journey. The distance-time graph shows the journey.
(a) For how many minutes did the cyclist stop?
(b) Work out the speed during the first part of the journey. Give your answer in km/h.



2 Solve $6(x - 1) = 4(x + 1) - 12$

3 A closed gift box is a cuboid measuring 13 cm by 4 cm by 6 cm.
Work out the total surface area.

4 A machine rests on an area of 0.5 m^2 of the floor.
The pressure on the floor is 150 N/m^2.
Work out the force exerted by the machine.

5 30% of a number is 9. (Calculator)
Work out 50% of the same number.

Day 276	A Tier 10-a-day
6 5 sandwiches and 2 drinks cost £25. 5 sandwiches and 3 drinks cost £30. Work out the cost of one drink.	
7 The diagram shows the cross-section of a metal pipe. The outer radius is 7 cm and the inner radius is 5 cm. The pipe is 15 cm long. Work out the volume of metal used. Give your answer in terms of π. 	
8 A metal block has mass 330 g and volume 180 cm^3. The mass is measured to the nearest 10 grams and the volume to the nearest cm^3. (Calculator) Work out the upper bound for the density of the metal in g/cm^3. Give your answer correct to 3 significant figures.	
9 A is the point (5, 2) and B is the point $(-3, 0)$. Find the equation of the perpendicular bisector of AB.	
10 Boat P sails 18 km from a harbour on a bearing of 195°. Boat Q sails 13 km from the same harbour on a bearing of 075°. (Calculator) Work out the distance between the two boats. Give your answer to 3 significant figures.	