

Answers Science 10 Interpreting Distance Time Graphs

1. Given the following position vs time graph calculate:

a. The speed of the object

$$V = \frac{\text{rise}}{\text{Run}} = \frac{\text{distance}}{\text{time}} = \frac{50\text{m}}{5\text{s}} = 10 \text{ m/s}$$

b. How far did the object travel in total?

The object travelled a total distance of 50 m

c. How long was the object in motion?

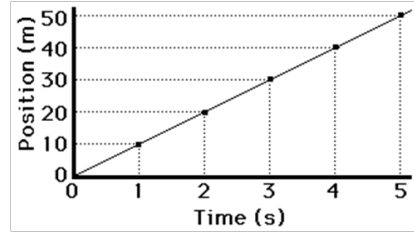
The object was in motion for 5 seconds

d. How long did it take to drive 30m?

It took 3 seconds to drive 30 meters

e. How far did the object travel in 2 seconds?

In two seconds the object travelled 20 meters



2. Given the following distance vs time graph calculate:

a. The speed of the object at a

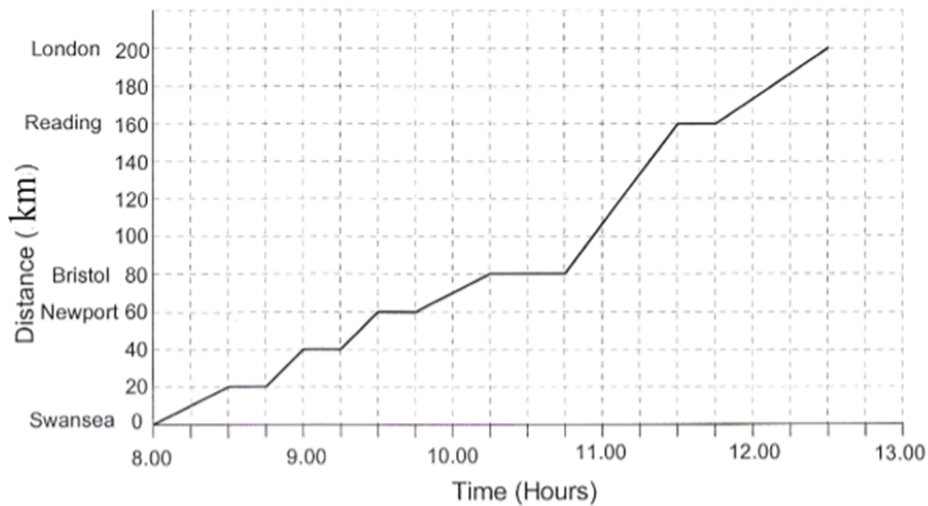
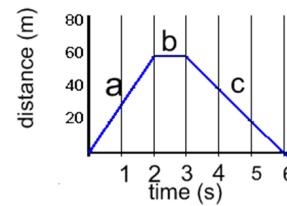
$$\text{Speed} = \frac{\text{rise}}{\text{Run}} = \frac{\text{distance}}{\text{time}} = \frac{60\text{m}}{2\text{s}} = 30\text{m/s}$$

b. The speed of the object at b

At B the object is stationary or at rest so the speed is zero

c. The speed of the object at c

$$\text{Speed} = \frac{\text{rise}}{\text{Run}} = \frac{\text{distance}}{\text{time}} = \frac{60\text{m}}{3\text{s}} = 20\text{m/s}$$



a. What time did the train arrive at Newport?

The train arrived in Newport at 9.5 hours

b. How many stops did the train make on its journey to London?

The train made 5 stops on its journey to London

c. What was the total distance travelled by the train?

The total distance travelled by the train was 200km

d. What was the speed of the train from 8.00 hours to 8.5 hours?

$$\text{Speed} = \frac{\text{rise}}{\text{Run}} = \frac{\text{distance}}{\text{time}} = \frac{20\text{km}}{0.5\text{h}} = 40\text{km/h}$$