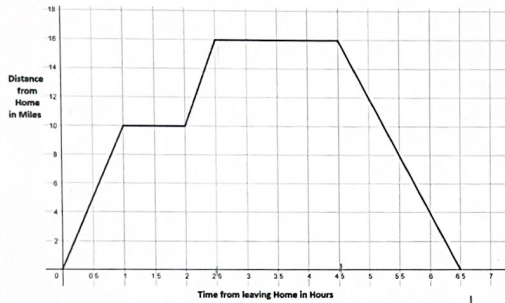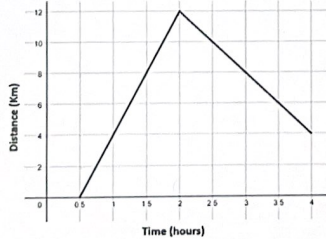# Answers

Travel Graphs (Distance/Time Graphs) - www.m4ths.com – Steve Blades ©

(1) The diagram below shows a distance/time graph. The graph represents a journey Bobni made from his house.
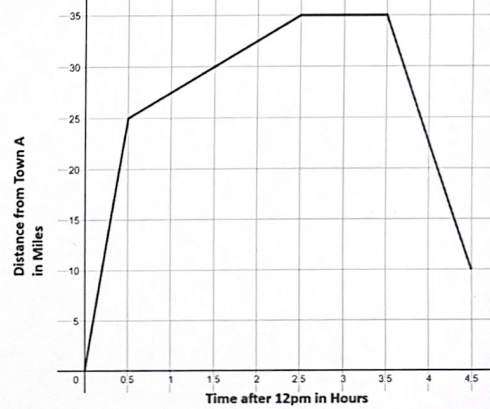

Distance from Home in Miles vs **Time from leaving Home in Hours**

(a) Find the speed Bobni travelled at for the first section of the journey. **10 mph**
(b) Describe what Bobni was doing for the second hour of the journey. **Stationary**
(c) Show that the speed for the 3rd section of the journey was 12mph. **6 ÷ 0.5 = 12**
(d) For how long was Bobni stationary for in total? **3 hours**
(e) When did Bobni start travelling back towards his house? **after 4.5 hours**
(f) Find the speed for the last section of travel. **8 mph**
(g) Find the total distance covered. **32 miles**
(h) Find the average speed for the whole journey excluding the breaks. **32/3.5 = 9.1 mph**

(2) Use the distance/time graph below to find the average speed of the entire journey.

Distance (Km) vs **Time (hours)**

$$\frac{13+9}{3.5} = 6.57 \text{ Kph}$$

(3) The diagram below shows a distance/time graph for a journey from Town A.

Distance from Town A in Miles vs **Time after 12pm in Hours**

(a) At what **time** was the person the furthest from Town A? **3.30pm**
(b) State when the person was stationary. **2.30 – 3.30pm**
(c) Find the average speed for the first part of the journey. **50 mph**
(d) How far were they from A when they finished the journey? **10 miles**
(e) Between what times was the person moving fastest? **12pm – 12.30pm**
(f) What was the total distance the person covered? **45 miles**

(4) Draw a distance/time graph suing the following information:
- The person travels from home for 6 miles in 2 hours.
- The person then rests for 3 hours
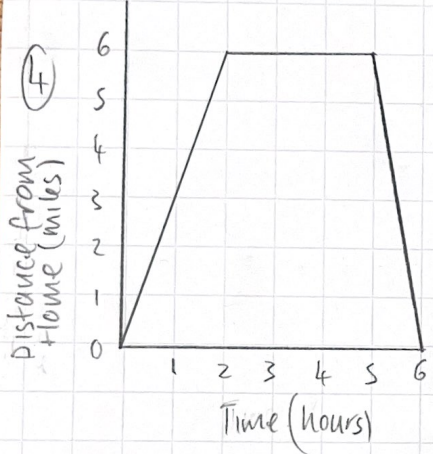- The person then returns home in 1 hours.

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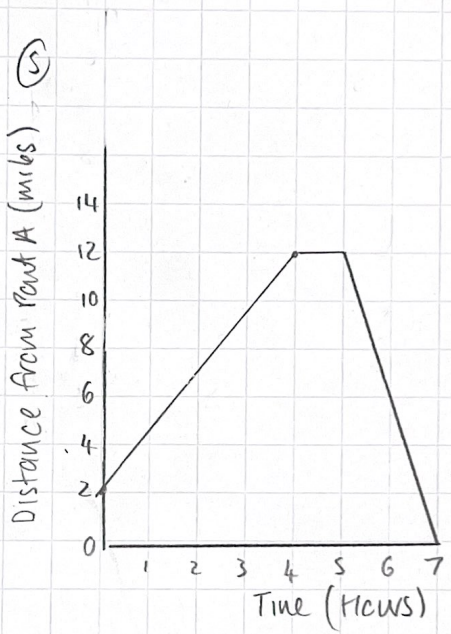(5) Draw a distance/time graph suing the following information:
- The person starts 2 miles from Point A
- The person then travels 10 miles in 4 hours
- The person then is stationary for an hour.
- The person then returns to point A in 2 hours.

(6) Draw ANY 2 different distance/time graph where the person travels to and from a fixed point at the same speed (a) Without a break and (b) With a break.
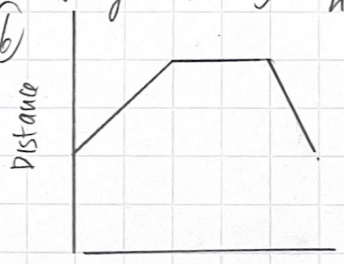
(4)

Distance from Home (miles)

6
5
4
3
2
1
0

Time (hours): 1 2 3 4 5 6

Time (hours)

(5)

Distance from Point A (miles)

14
12
10
8
6
4
2
0

Time (Hours): 1 2 3 4 5 6 7

Time (Hours)

(6)

(a)

Distance

Time

Anything with no flat line.
Starting and finishing at same
height

(b)

Distance

Time.

Anything starting and
finishing at the same
height with a flat line.