Journey

This problem gives you the chance to:
• draw and interpret a graph of speed, distance and time

Here is a description of a car journey.

"I left home at 2:00 hours. I traveled for half an hour at forty miles an hour, then for an hour at fifty miles an hour. I had a half hour stop for lunch, then I travelled for two hours at fifty-five miles an hour."

1. Complete this table showing the distances traveled by the end of each stage of my journey.

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<tr>
<td>Distance from home in miles</td>
<td>0</td>
<td>20</td>
<td>70</td>
<td>70</td>
<td>180</td>
</tr>
</tbody>
</table>

2. Draw a distance-time graph for this journey on the grid below.
3. What is the average speed for the whole journey?

Explain how you figured it out.

I figured that if I divided the trip into 1/2 hour sections and what speed the car was traveling at for each 1/2 section and added all 8 sections speeds together and divided by 8 I could get the average speed.

4. Use your graph to find:

a. How far from home I had traveled by 5:15.

   140 miles

b. At what time I had traveled 60 miles from home.

   3:15 hours
Journey

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2. Draw a distance-time graph for this journey on the grid below.
3. What is the average speed for the whole journey?

30 mph

Explain how you figured it out.

I added all the numbers in the chart up then divided by 5

4. Use your graph to find:

a. How far from home I had traveled by 5:15.

70 miles

b. At what time I had traveled 60 miles from home.

5:05 hours
Journey

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2. Draw a distance-time graph for this journey on the grid below.
3. What is the average speed for the whole journey?

50 mph

Explain how you figured it out.

I knew that \( \frac{1}{4} \) of her time she was going 40 mph, and \( \frac{1}{2} \) of it she was going 50 mph, so then I got 40, 50, 55, and found the mean for that.

4. Use your graph to find:

a. How far from home i had traveled by 5:15.

140 miles

b. At what time I had traveled 60 miles from home.

About 3:30 hours
Journey

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<tr>
<td>Distance from home in miles</td>
<td>0</td>
<td>20</td>
<td>75</td>
<td>75</td>
<td>185</td>
</tr>
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2. Draw a distance-time graph for this journey on the grid below.
3. What is the average speed for the whole journey? 

Explain how you figured it out.

I added up 40 + 50 + 55 and got 145. Then I divided that by 3 and got 48.3.

4. Use your graph to find:
   a. How far from home I had traveled by 5:15.

   about 140 miles

   b. At what time I had traveled 60 miles from home.

   3:15 hours
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2. Draw a distance-time graph for this journey on the grid below.
3. What is the average speed for the whole journey?  

   45 mph  

   Explain how you figured it out.  

   I divided 180 by 4.  

4. Use your graph to find:  

   a. How far from home I had traveled by 5:15.  

      138.75 miles  

   b. At what time I had traveled 60 miles from home.  

      About 1 1/4 hours
Journey

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<td>20</td>
<td>70</td>
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<td>170</td>
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2. Draw a distance-time graph for this journey on the grid below.
3. What is the average speed for the whole journey?

Explain how you figured it out.

You did 180 by 40. You get 45 mph. She traveled 9 hours
and went 180 miles from home so 45 mph.

4. Use your graph to find:

   a. How far from home I had traveled by 5:15.

      130 miles

   b. At what time I had traveled 60 miles from home.

      3:10 hours
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<tr>
<td>Distance from home in miles</td>
<td>0</td>
<td>22.5</td>
<td>77.5</td>
<td>117.5</td>
<td>187.5</td>
</tr>
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2. Draw a distance-time graph for this journey on the grid below.
3. What is the average speed for the whole journey?
   
   Explain how you figured it out.
   
   I added all the minutes up then divided it by 4 (or how many # I added)

4. Use your graph to find:
   
   a. How far from home I had traveled by 5:15.

   90 miles

   b. At what time I had traveled 60 miles from home.

   3:10 hours
Journey

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2. Draw a distance-time graph for this journey on the grid below.
3. What is the average speed for the whole journey?

Explain how you figured it out.

\[ \frac{40 + 50 + 50 + 0 + 55 + 55 + 55 + 55}{8} = \frac{360}{8} = 45 \text{ mph} \]

4. Use your graph to find:
   a. How far from home I had traveled by 5:15.
      \[ 145 \text{ miles} \]
   b. At what time I had traveled 60 miles from home.
      \[ 3:10 \text{ hours} \]
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This problem gives you the chance to:
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<td>0</td>
<td>40</td>
<td>90</td>
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2. Draw a distance-time graph for this journey on the grid below.
3. What is the average speed for the whole journey?

Explain how you figured it out.

I just counted the distance between the miles away from home.

4. Use your graph to find:
   a. How far from home I had traveled by 5:15.

   9.70 miles

   b. At what time I had traveled 60 miles from home.

   1.20 hours
Journey

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<td>Distance from home in miles</td>
<td>0</td>
<td>40</td>
<td>80</td>
<td>90</td>
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2. Draw a distance-time graph for this journey on the grid below.
3. What is the average speed for the whole journey?

Explain how you figured it out.

I added 40 + 50 + 55, and got 145. I then divided 145 by 3 and got 48.3 but rounded down to 48.

4. Use your graph to find:

a. How far from home I had traveled by 5:15.

   about 160 miles

b. At what time I had traveled 60 miles from home.

   around 2:50 hours
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3. What is the average speed for the whole journey?

Explain how you figured it out.

\[
\frac{\text{miles}}{\text{time}} = \frac{180}{4 \text{ hrs}} = \frac{x}{1}, \quad x = 45
\]

4. Use your graph to find:

a. How far from home I had traveled by 5:15.

approx \hspace{1cm} 130 \hspace{1cm} \text{miles}

b. At what time I had traveled 60 miles from home.

after \hspace{1cm} 3\text{.}\hspace{0.5mm}20 \hspace{1cm} \text{hours}
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2. Draw a distance-time graph for this journey on the grid below.
3. What is the average speed for the whole journey? 
   Explain how you figured it out.

   I added 22.5 (half of 45), 50, 0, and 110 (twice of 55). Then divided it by 4.

4. Use your graph to find:
   a. How far from home I had traveled by 5:15.
      140 miles
   b. At what time I had traveled 60 miles from home.
      3:17:50 hours
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3. What is the average speed for the whole journey?

Explain how you figured it out.

He was pretty much going 50 mph the whole time.

50 mph

4. Use your graph to find:

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140 miles

b. At what time I had traveled 60 miles from home.

3:17 hours
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3. What is the average speed for the whole journey?

Explain how you figured it out.

I added \(40 + 50 + 55 = 145\) and divided that by 3.

4. Use your graph to find:

a. How far from home I had traveled by 5:15. 

b. At what time I had traveled 60 miles from home.

137.75 miles

3:15 hours
Journey

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3. What is the average speed for the whole journey?

Explain how you figured it out.

\[ \frac{40 + 50 + 0 + 55}{4} = 36.25 \text{ mph} \]

4. Use your graph to find:
   a. How far from home I had traveled by 5:15.

\[ 140 \text{ miles} \]

b. At what time I had traveled 60 miles from home.

\[ 3:15 \text{ hours} \]