ANNOUNCEMENTS

- UNIT 2-3 TEST TOMORROW
- CALCULATOR
- REFERENCE PAGE
- ONE PAGE OF NOTES
- CELL PHONES
- SEATING ARRANGEMENT
- TEST TIME

3.4 Describing Motion with Graphs

STANDARDS

3.2 I can interpret, analyze, and create acceleration vs. time graphs for objects moving with constant acceleration.

What Is The Story?

Consider the following graph of a car in motion. Use the graph to answer the questions.

a. Describe the motion of the car during each of the two parts of its motion.
   \[ \text{constant} \]
   \[ \text{constant} \]

b. Construct a displacement for the car’s motion.

Different Story?

Consider the following graph of a car in motion. Use the graph to answer the questions.

c. Determine the displacement of the car during each of the two parts of its motion.
   \[ \text{constant} \]
   \[ \text{constant} \]

d. Determine the displacement of the car during each of the two parts of its motion.
   \[ \text{constant} \]

\[ \frac{1}{2} v t = \frac{1}{2} (5 \text{ m/s})(20 \text{ s}) \]

\[ \Delta x = 5 \text{ m} \]

\[ \Delta x = 20 \text{ m} \]
Consider the following graph of a car in motion. Use the graph to answer the questions.

e. Fill in the table and sketch position-time for this car's motion. Give particular attention to how you connect coordinate points on the graphs (curves vs. horizontal vs. diagonal).

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Pos (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>15</td>
<td>150</td>
</tr>
</tbody>
</table>