

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

### Distance-Time Graphs

Describing the motion of an object is occasionally hard to do with words. Sometimes **graphs** help make motion easier to picture, and therefore understand.

Plotting distance against time can tell you a lot about motion. First, look at the axes:



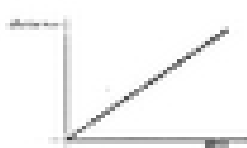
Time is always plotted on the X-axis (bottom of the graph). The further to the right on the axis, the longer the time from the start.

Distance is plotted on the Y-axis (side of the graph). The higher up the graph, the further from the start.

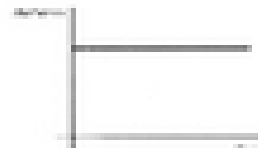
Match each of the following:

- A. the car is stopped
- B. the car is traveling at constant speed
- C. the speed of the car is decreasing

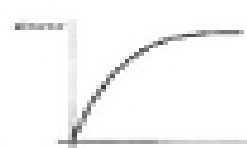
1.



2.



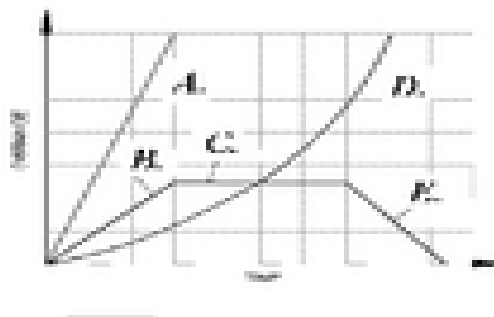
3.



1. Graph 1 matches description \_\_\_\_\_ because \_\_\_\_\_

2. Graph 2 matches description \_\_\_\_\_ because \_\_\_\_\_

3. Graph 3 matches description \_\_\_\_\_ because \_\_\_\_\_



Match the part of the graph to the description:

- 4. Stationary: \_\_\_\_\_
- 5. Increasing speed: \_\_\_\_\_
- 6. Slow & constant speed: \_\_\_\_\_
- 7. Fast & constant speed: \_\_\_\_\_
- 8. Returning to start: \_\_\_\_\_

Summary:

- The steeper the graph, the faster the motion.