Slope of Position Graphs

Purpose

To determine the relationship of slope of a position graph and the velocity

Curriculum outcome(s)

S2-3-01 Analyze the relationship among displacement, time, and velocity for an object in uniform motion.   *Include: Visual, numeric, graphical, symbolic (v = $\frac{\Delta d}{\Delta t}$)*

Questions

Use the graph on the last page to answer the following questions

1. In which section(s) are the following occurring?

    a. Moving forward   _____

    b. Moving backward   _____

    c. Not moving   _____

    d. In front of the origin   _____

    e. Behind the origin   _____

2. Without calculating, which section(s) are moving the fastest? How can you tell? (Ignore direction for this question)

3. What is the position at the following times? (Be sure to include the units for position)
    a. 2s   _____

    b. 4s   _____

    c. 5s   _____

    d. 7s   _____

    e. 8.5s   _____

4. Determine the slope for each section. Show your work as we did in class

   A.

   B.

   C.

   D.

5. How do the values you calculated in question #4 support your answers in question #1 a, b & c?

6. What can you conclude regarding the slope of part C & D