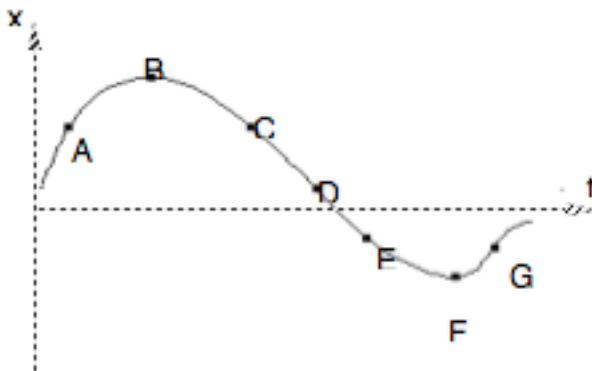


UNIT III: Worksheet 3

1. The graph below represents the motion of an object.



a. For each point on the graph draw a line tangent to the point. What does this line represent?

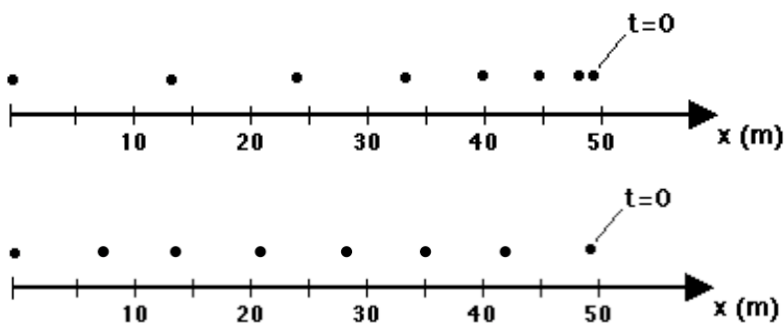
b. At what point(s) on the graph above is the object moving most slowly? (How do you know?)

c. Over what intervals on the graph above is the object speeding up? (How do you know?)

d. Over what intervals on the graph above is the object slowing down? (How do you know?)

e. At what point(s) on the graph above is the object changing direction? (How do you know?)

2. The drawing below shows two moving objects that have been photographed using a strobe flash. The objects start at rest and move to the **left**. The dots show the location of the objects at **each second**.



a. How is the motion of the two objects different?

b. What is the **average velocity** for each object? Show your work.

c. Do the objects ever have the same **instantaneous velocity**? How do you know?

