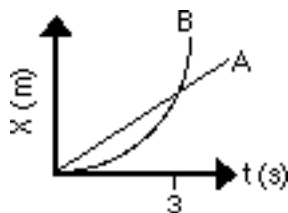


Linear Motion Graphs WS 1

NAME:

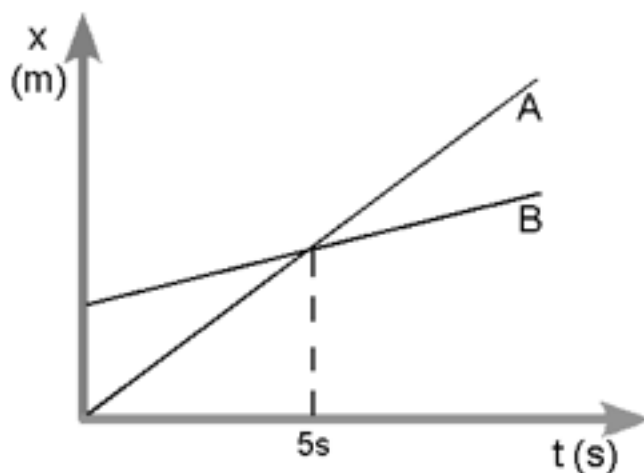
Using the graph below, compare the kinematic behavior of the two objects.



Comparison: is $A > B$, $A < B$, or $A = B$, **How do you know?**

- a. Displacement at 3 s
- b. **Average** velocity from 0 - 3 s
- c. **Instantaneous** velocity at 3 s

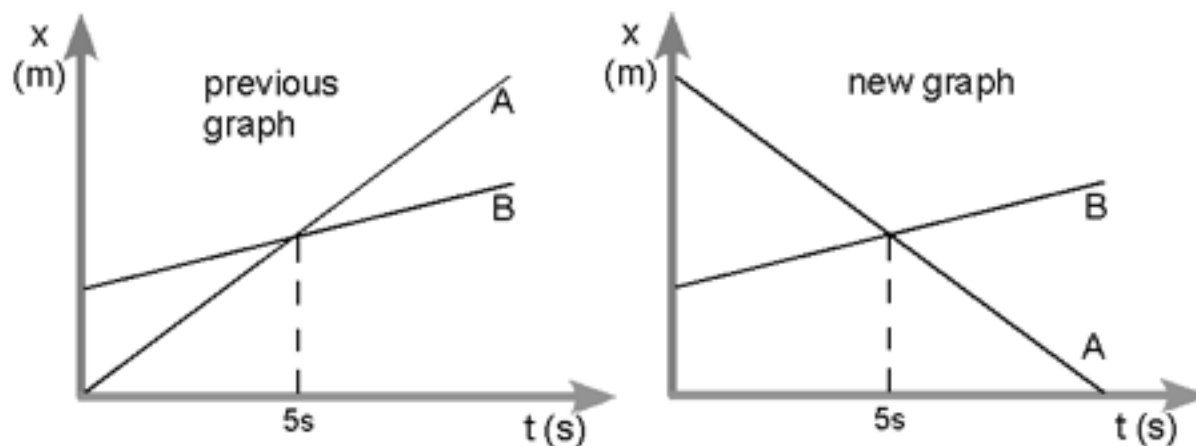
Consider the position vs. time graph below for cyclists A and B.



- a. Do the cyclists start at the same point? How do you know? If not, which is ahead?
- b. At $t = 7\text{s}$, which cyclist is ahead? How do you know?
- c. Which cyclist is travelling faster at $t = 3\text{s}$? How do you know?

Linear Motion Graphs WS 1

- d. Are their velocities equal at any time? How do you know?
 - e. What is happening at the intersection of lines A and B?
2. Consider the new position vs. time graph below for cyclists A and B.



- a. How does the motion of the cyclist A in the new graph compare to that of A in the previous graph from page one?
- b. How does the motion of cyclist B in the new graph compare to that of B in the previous graph?
- c. Which cyclist has the greater speed? How do you know?
- d. Describe what is happening at the intersection of lines A and B.
- e. Which cyclist traveled a greater distance during the first 5 seconds? How do you know?