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## UNIT II Worksheet 1

1. 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 $\mathrm{t}=7 \mathrm{~s}$, which cyclist is ahead? How do you know?
c. Which cyclist is travelling faster at $\mathrm{t}=3 \mathrm{~s}$ ? How do you know?
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?
