

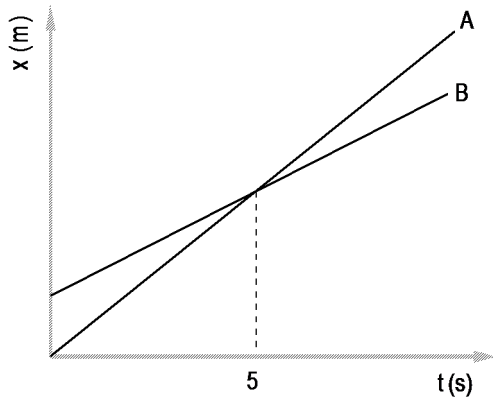
Unit III – Worksheet # 1

Name _____

First Attempt

Corrections/Solutions

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

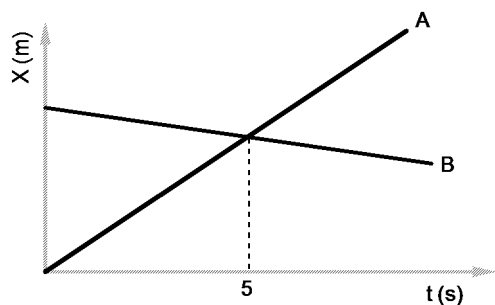


- Do the cyclists start at the same point? How do you know? If not, which is ahead?
- At $t = 7\text{s}$, which cyclist is ahead? How do you know?
- Which cyclist is travelling faster at 3s ? How do you know?
- Are their velocities equal at any time? How do you know?
- What is happening at the intersection of lines A and B?

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e. What is happening at the intersection of lines A and B?

2. 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 3s ?
How do you know?

d. What is different about the motion of B in this problem compared to #1? What is the same?

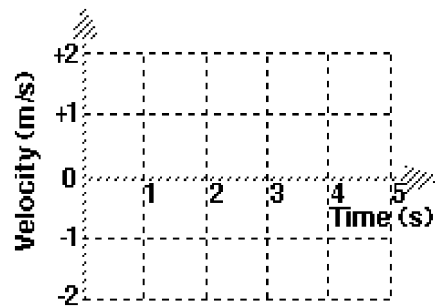
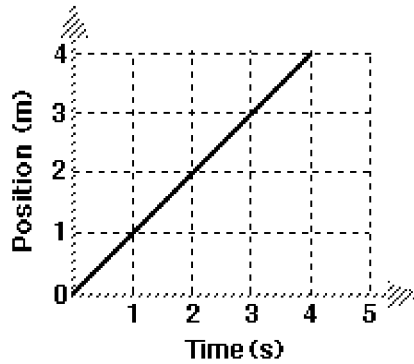
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First Attempt

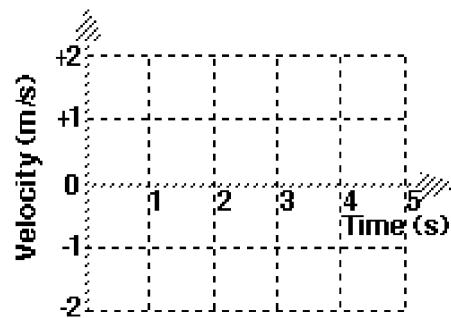
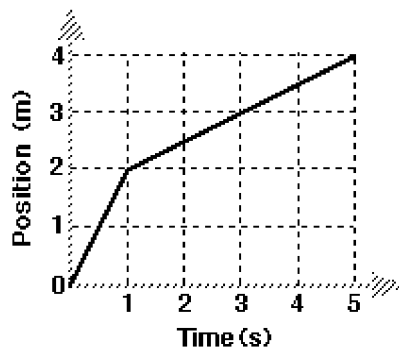
Corrections/Solutions

3. For each of the position vs time graphs shown, draw the corresponding velocity vs time graph.

A)



B)

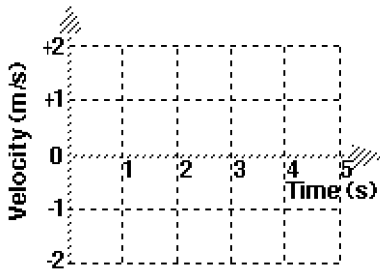
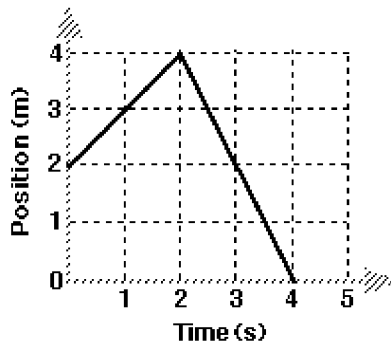


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C)



4. For each of the descriptions below, sketch a velocity vs. time graph that corresponds to the description.

A) An object moves away from the origin at a constant velocity.

B) An object moves towards the origin at a constant velocity for half the time, then stops for the other half of the time.

C) An object moves in one direction at a constant velocity for half the time, then reverses direction at a greater speed for the other half of the time.