Name _____ Date _____

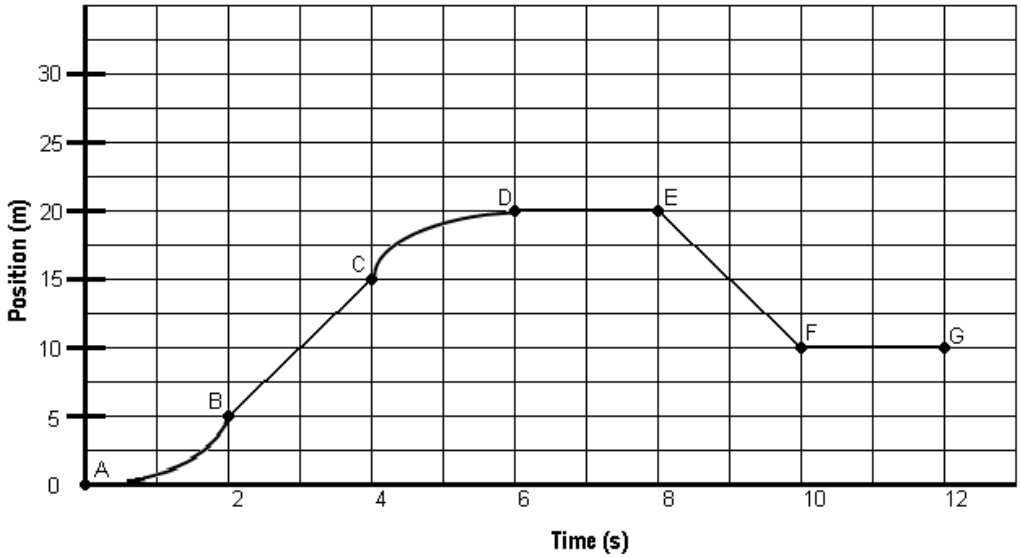
Honors Physics Kinematics WS #4H

Period _____ Mrs. Nadworny

Motion Graphs

Directions: For the two graphs provided, determine which type of motion is occurring. Answer the questions below the graph, being **as specific as possible**.

Position vs. Time



1. What is the physical significance of the slope of a position versus time graph? _____
2. What is the distance traveled between points B and C? _____
3. Calculate the velocity between points B and C.
4. What is the distance traveled between points D and E? _____
5. During which interval(s) was the object traveling at constant speed? _____
6. During which interval(s) was the object accelerating? _____
7. During which interval(s) was the object decelerating? _____
8. During which interval(s) was the object at rest? _____
9. What was the displacement for the entire trip? _____

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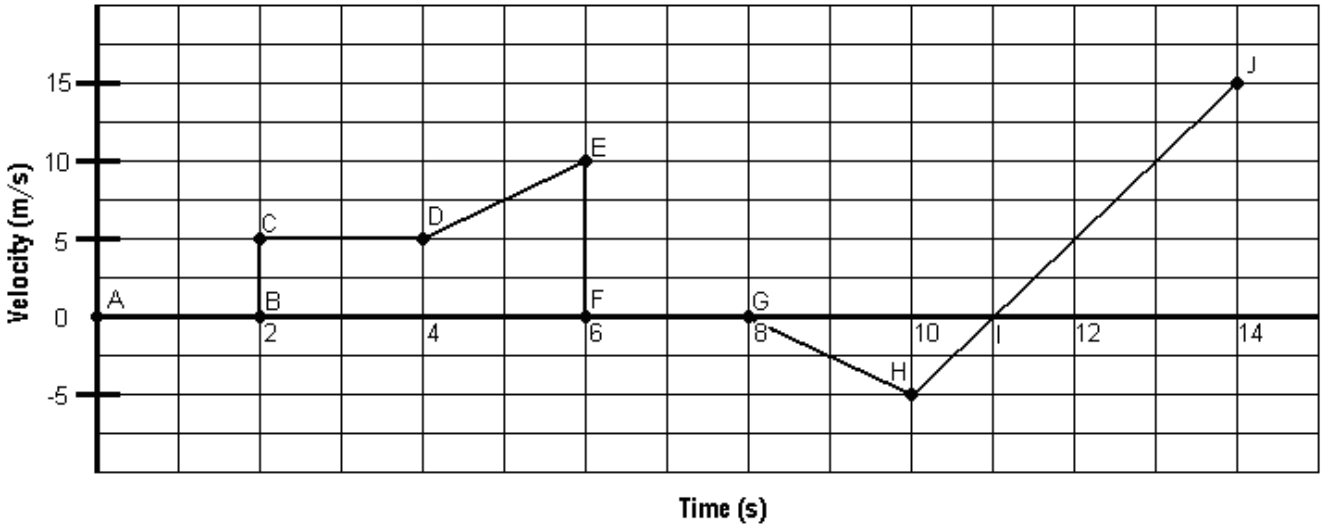
Velocity vs. Time



1. What is the physical significance of the slope of a velocity versus time graph? _____
2. What is the physical significance of the area under the curve of a velocity versus time graph? _____
3. Calculate the distance traveled between points C and D.

4. Which direction is the object moving between points C and D? _____
5. During the interval CD is the speed increasing, decreasing, or remaining the same? _____
6. Calculate the distance traveled between points G and H.

7. Which direction is the object moving between points G and H? _____
8. During the interval GH is the speed increasing, decreasing, or remaining the same? _____
9. During which interval did the object travel the greatest distance? CD GH IJ
10. Calculate the acceleration of the object between points D and E.

11. Describe the motion of the object between points F and G. _____
12. During which interval(s) does the object have negative acceleration? _____
13. During which interval(s) is the object at rest? _____
14. At which point does the object reverse its direction of motion? _____