

Name: _____
Mr. Willis
Conceptual Physics: _____
Date: _____

Unit II
Motion (Velocity/Acceleration)
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II

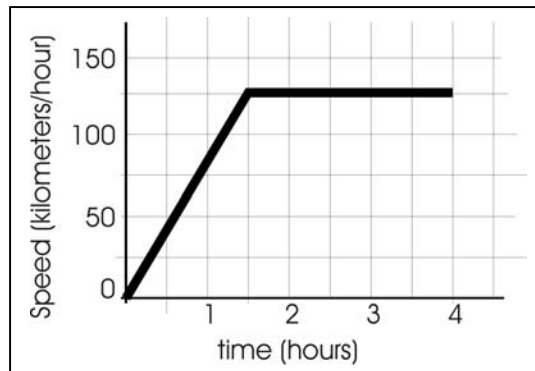
Acceleration and Speed-Time Graphs

Objective: To understand that acceleration is the slope of a velocity-time graph.

Key Concept: Acceleration is the slope of the velocity-time graph.

Example: The slope of the following line is the acceleration.

- Find the slope. slope = _____
- Is the slope positive or negative? _____



Directions: Examine the graphs on the back and answer the following questions.

Graph A

- Find the slope of the line between zero and two hours. _____
- Find the slope after two hours. _____
- Is the slope positive or negative during the first two hours? _____
- Is the object accelerating or decelerating between 0 and 2 hours? _____

Graph B

- During what time interval is the slope zero? _____
- During what time interval is the slope positive? _____
- During what time interval is the slope negative? _____
- If the object is a car, when is it coasting? _____

Graph C

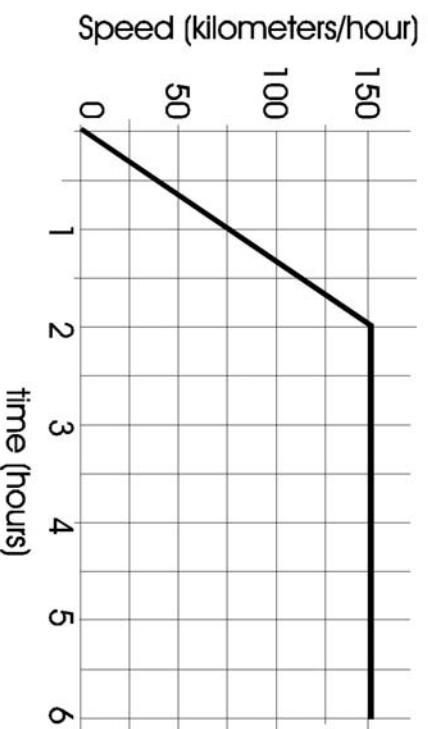
- Is the slope ever negative on this graph? _____
- When is the object not accelerating? _____
- When is the object accelerating the most? _____
- When is the object moving with the highest speed? _____

Graph D

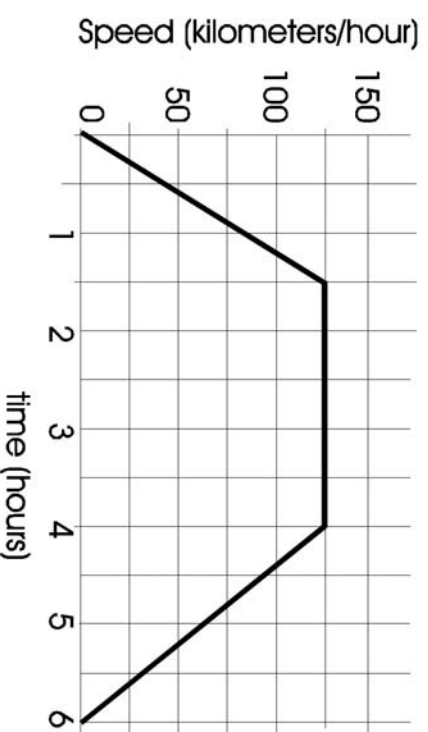
- What is the speed at one hour? _____
- When is the object accelerating? _____
- When is the object decelerating? (Slowing down.) _____
- What is the speed after six hours? _____

Speed - Time Graphs

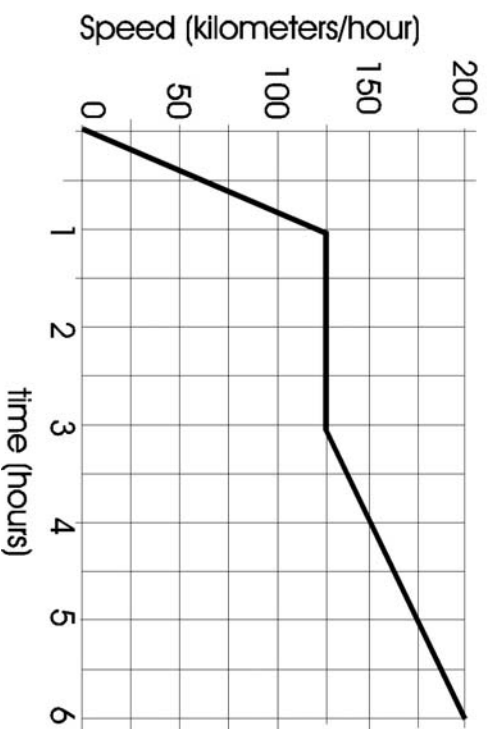
Graph A



Graph B



Graph C



Graph D

