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Moving Man Graphs  
Go to Website: <http://phet.colorado.edu/simulations/sims.php?sim=The_Moving_Man>

Sketch the Graph pattern for the following types of motion. You will graph distance, velocity, and acceleration for each type of motion.   
Purpose/Objective: To be able to identify and describe motion on a position, velocity or acceleration graph.

Situation #1: No Motion (velocity = 0 and acceleration = 0).  
  
 Distance Vs Time Velocity vs Time Acceleration vs Time

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Situation #2: Moving at **Constant Velocity to the RIGHT**. (Velocity = +5 m/s, Position = -9m, Acceleration = 0)

Distance Vs Time Velocity vs Time Acceleration vs Time

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Situation #3: **Constant Velocity to the LEFT**. (Velocity = -5 m/s, Position = +9m, Acceleration = 0)

Distance Vs Time Velocity vs Time Acceleration vs Time

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Situation #4: Acceleration from REST. (Position = **-**9m, velocity = 0 and acceleration = +1).  
  
 Distance Vs Time Velocity vs Time Acceleration vs Time

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Situation #5: Moving to the right with constant negative acceleration.   
(Position -9 m, velocity +5 m/s, acceleration -1 m/s2)

Distance Vs Time Velocity vs Time Acceleration vs Time

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Situation #6: : Moving to the left with constant positive acceleration.   
(Position +9 m, velocity -5 m/s, acceleration +1 m/s2)

Distance Vs Time Velocity vs Time Acceleration vs Time

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Summary: Refer to graphs for answers

1. On a distance time graph:
   1. a straight line with No slope illustrates what type of motion? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. a straight line with Positive slope illustrates what type of motion? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. a straight line with Negative slope illustrates what type of motion? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. an upward curve pattern illustrates what type of motion? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   5. a downward curve pattern illustrates what type of motion? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. On a Velocity-Time graph:
   1. Straight line with no slope illustrates what type of motion? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Straight line with a positive slope illustrates what type of motion? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Straight line with a negative slope illustrates what type of motion? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What does negative acceleration do to an object moving to the right? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What does zero acceleration do to an object  
   1. at Rest? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. that is moving? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. What are the two types of motion that result from zero acceleration?
   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Stepping on the brakes of a moving car produces what type of acceleration? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_