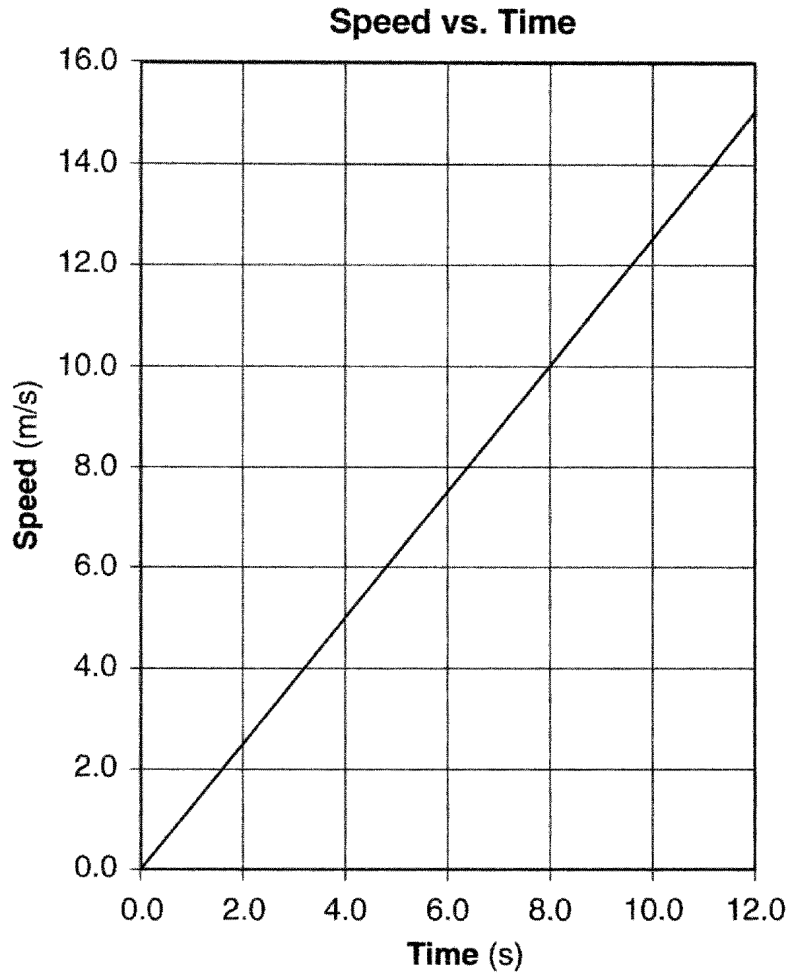

Base your answers to questions 1 and 2 on the information and graph below.

The graph below shows the relationship between speed and elapsed time for a car moving in a straight line.



1. Calculate the total distance the car traveled during the time interval 4.0 seconds to 8.0 seconds. [Show all work, including the equation and substitution with units.]
-

Part 2 Review A

2. Determine the magnitude of the acceleration of the car.

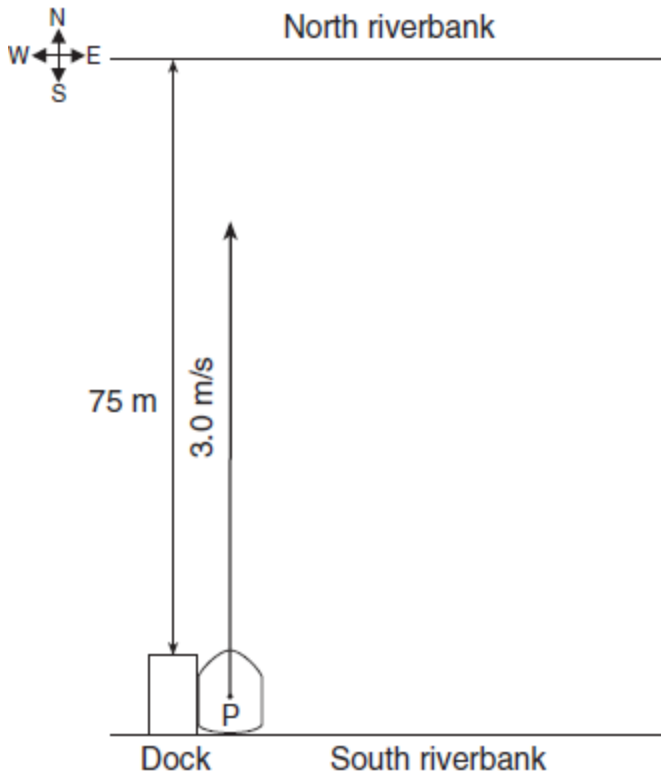
3. Calculate the time required for a 6000.-newton net force to stop a 1200.-kilogram car initially traveling at 10. meters per second. [Show all work, including the equation and substitution with units.]

4. Calculate the magnitude of the average gravitational force between Earth and the Moon. [Show all work, including the equation and substitution with units.]

Part 2 Review A

Base your answers to questions 5 and 6 on the information below.

A river has a current flowing with a velocity of 2.0 meters per second due east. A boat is 75 meters from the north riverbank. It travels at 3.0 meters per second relative to the river and is headed due north. In the diagram below, the vector starting at point P represents the velocity of the boat relative to the river water.



5. Calculate the time required for the boat to cross the river. [Show all work, including the equation and substitution with units.]

Part 2 Review A

6. Calculate *or* find graphically the magnitude of the resultant velocity of the boat. [Show all work, including the equation and substitution with units *or* construct the resultant velocity vector for the graph, using a scale of 1.0 centimeter = 0.50 meter per second. The value of the magnitude must be written below]