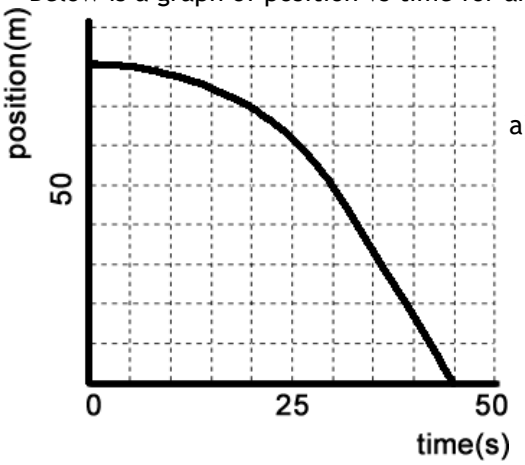
AP Physics
1D Kinematics Test

Name:_____

Below is a graph of position vs time for an RC car.



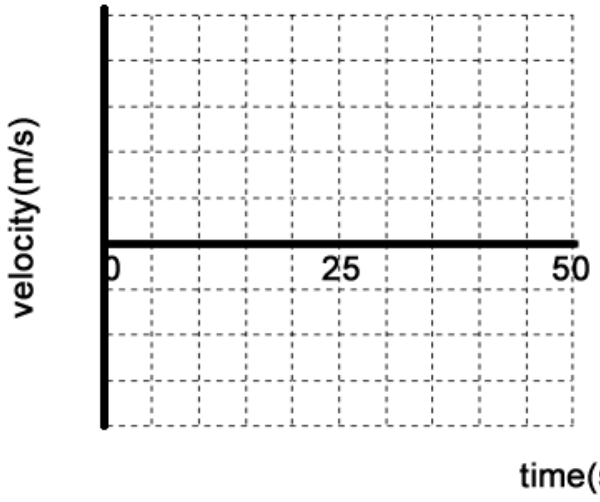
a) Describe the motion of the RC car.

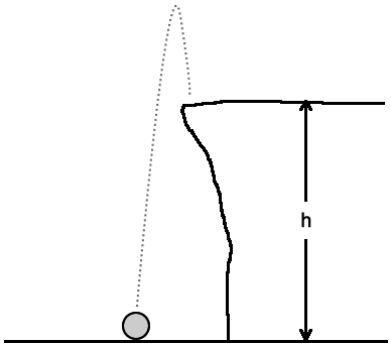
b) Determine the average acceleration of the car from 0-30 seconds.

c) Determine the velocity of the car at 40 seconds.

d) Determine the the average velocity of the car for the whole 45 seconds.

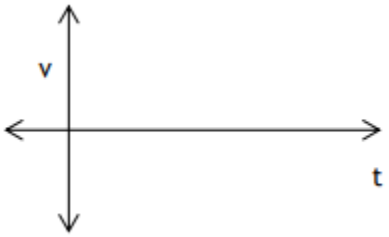
e) Graph the velocity vs. time for the RC car.





A ball is launched upwards from the ground and lands on top of a cliff 8 seconds later. The ball strikes the cliff on its way down at 15 m/s.

a) Sketch the following graphs of the ball. Exact numbers are not needed.



b) Determine the speed of the ball when it was launched.

c) Determine the height of the cliff.

d) What is the total distance traveled by the ball?