Name: _____   Date: _____

Graphical Kinematics: Velocity vs. Time

Instructions: An object's changing velocity is depicted in the Velocity vs. Time Graph below. Use the graph to answer the following questions. Descriptions must be written in complete sentences. For any questions involving calculations, you must show ALL your computation work. Acceleration answers should be in $\frac{m}{s^2}$ units.

1.
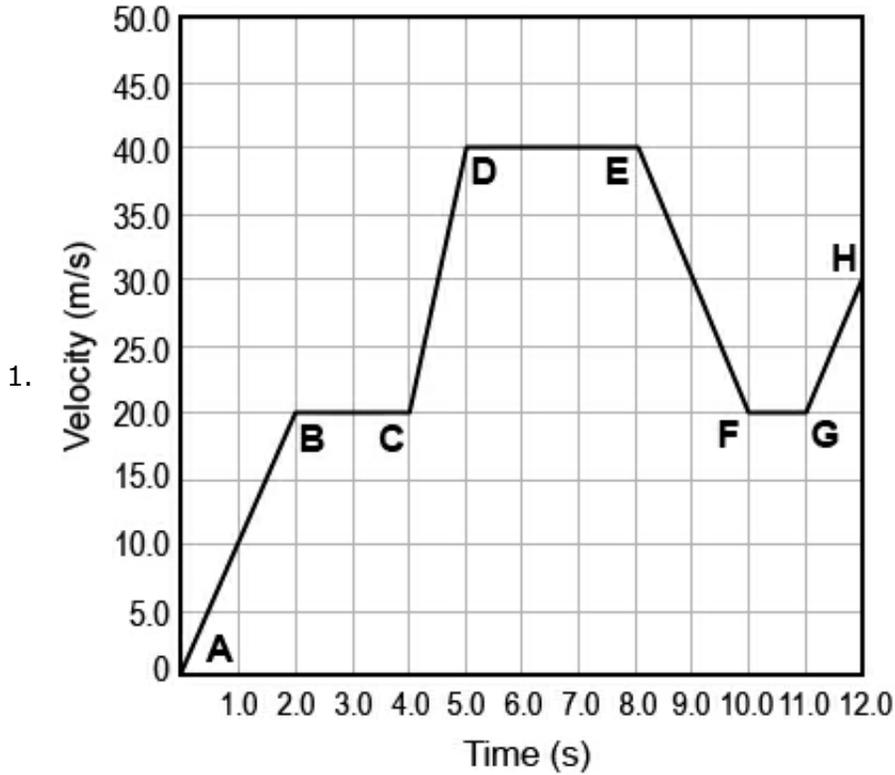
A. Describe, in detail, the motion of the object during the time interval from A to B on the graph.

B. Calculate the acceleration of the object during the time interval from A to B.

C. Determine the change in position of the object during the time interval from A to B.

D. Describe, in detail, the motion of the object during the time interval from B to C.

E. Determine the change in position of the object during the time interval from B to C.

F. Describe, in detail, the motion of the object during the time interval from C to D.

G. Calculate the acceleration of the object during the time interval from C to D.

H. Determine the change in position of the object during the time interval from C to D and how far it has moved in total from time=0.

I. Describe, in detail, the motion of the object during the time interval from E to F.

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J. Calculate the acceleration of the object during the time interval from E to F, and the final position of the object at H.