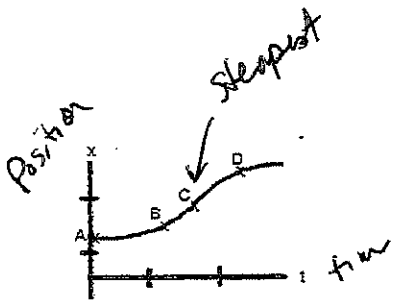
Name: _____ Class: _____ Date: _____ ID: A

PQ1 Graphically representing motion

Multiple Choice



____ 1.

The model shows the position and time of a car driving down a straight road. At which point is the velocity of the car the greatest?

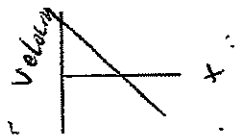
a. A b. B c. C d. D

____ 2. Based upon the model provided which of the following comparisons is correct relative to point B and point D.

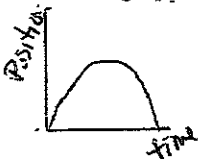
I. B has a + velocity and a + acceleration
II. D has a + velocity and a - acceleration
III. Both B and D are slowing down

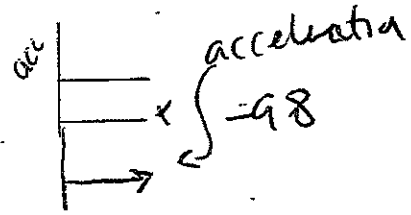
a. I only b. II only c. I and III only d. I and II only

____ 3. A ball was thrown straight up in the air. The ball goes up and then comes down. The following models representing the [illegible] generated. Which is the correct [illegible] time graph?

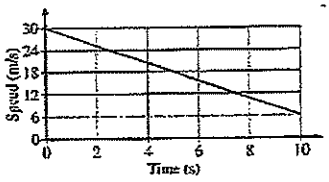
a. 

b. 

c. 

d. 

____ 4.

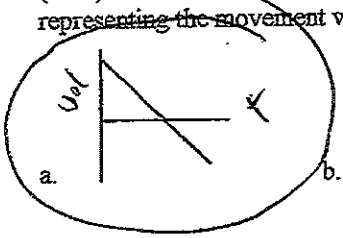


The graph above shows the speed of a truck as it moves along a straight, level road. Which of the following describe a method to determine the distance *d* the truck travels during the 10s time interval shown?

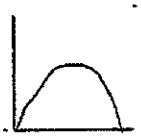
I. Convert the graph to a velocity time graph and use the slope.
II. Convert the graph to a distance time graph and use the area under the curve.
III. Calculate the slope of the line in the graph to determine the acceleration *a* and then used $d = 1/2\ at^2$, where *t* is the travel time.
IV. Calculate the area under the graph.

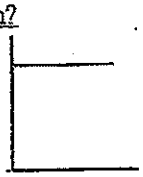
a. I b. II c. III d. IV

____ 5. (#2-1)A ball was thrown straight up in the air. The ball goes up and then comes down. The following models representing the movement were generated. Which is the correct velocity time graph?

a. 

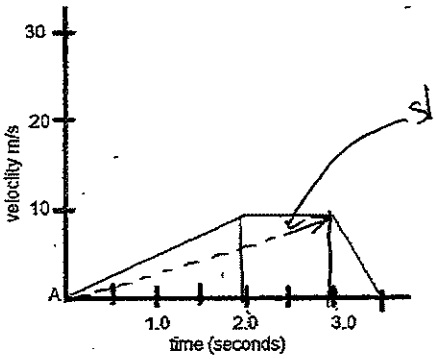
b. 

c. 

d. 

rt Answer

6.



slope of dashed line

a. What is the acceleration between 0-2 seconds? $5 m/s^2$

b. What is the distance traveled at 3 seconds? 25m

$\frac{1}{2} 2 \cdot 10 = 10$ $1 \cdot 10 = 10$ $\frac{1}{2}(.5 \cdot 10) = 2.5$ } 22.5m

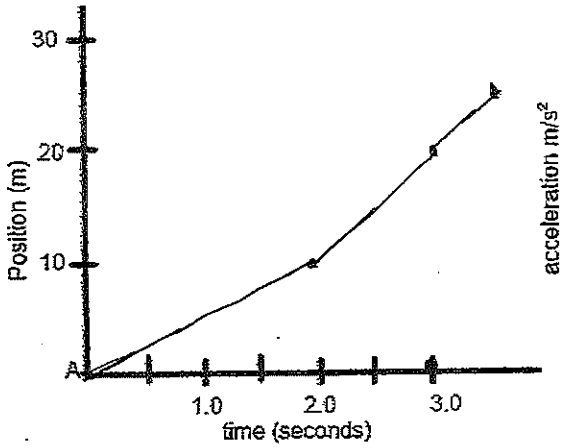
c. What is the sign(+/-) for the velocity/acceleration for each time frame.

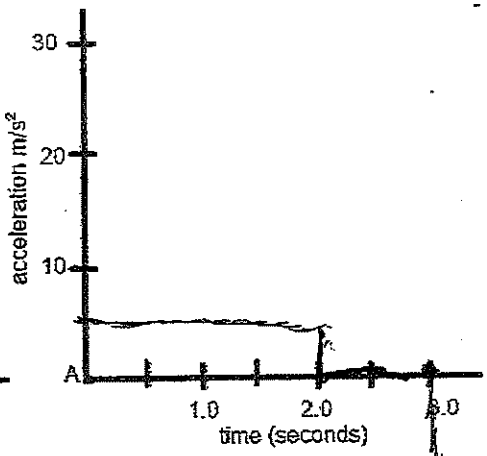
	0 - 2	2 - 3	3 - 4
Velocity	+	+	+
acceleration	+	0	−

c. Demonstrate on the graph above how you would determine the average acceleration. over the 1st 3 seconds

Draw a line. Use Slope.

d. Complete the graphs relative to the graph above.





acceleration
0 - 2

$\frac{10 - 0}{2} = 5 m/s$

2 - 3

$= 0 m/s$

3 - 3.5 $\frac{0 - 10}{.5} = -20$

-20