ANNOUNCEMENTS

- UNIT 2-3 TEST **TOMORROW**
- CALCULATOR
- REFERENCE PAGE
- ONE PAGE OF NOTES
- CELL PHONES
- SEATING ARRANGEMENT
- TEST TIME

1 2 3 4

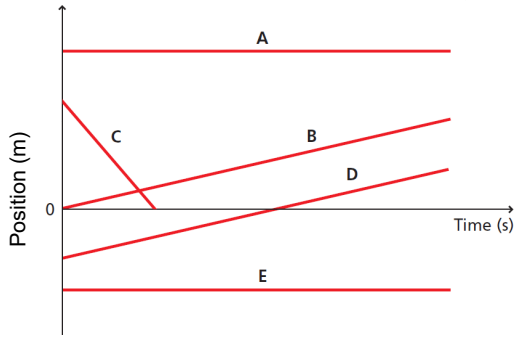
1/1 2/3 3/6 4/10

3.4 Describing Motion with Graphs

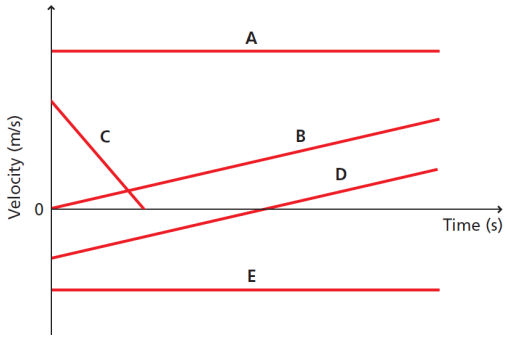
STANDARDS

3.2 I can interpret, analyze, and create acceleration vs. time graphs for objects moving with constant acceleration.

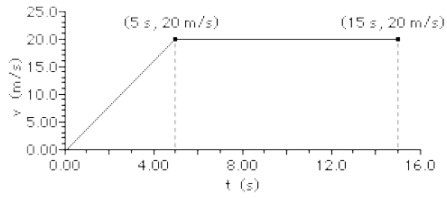
What Is The Story?



Different Story?



Consider the following graph of a car in motion. Use the graph to answer the questions.

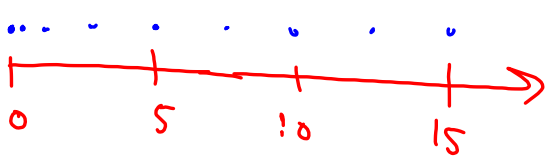


a. Describe the motion of the car during each of the two parts of its motion.

0-5 s: constant $\vec{v}$

5-15 s: Constant $\vec{v}$

b. Construct a *dot diagram* for the car's motion.



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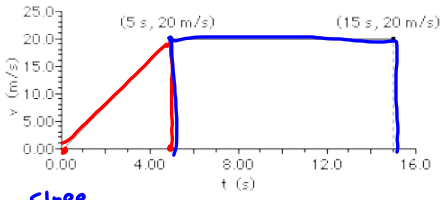


c. Determine the acceleration (slope) of the car during each of the two parts of its motion.

0-5 s: $\frac{20\ m/s}{5\ s} = 4\ m/s^2$

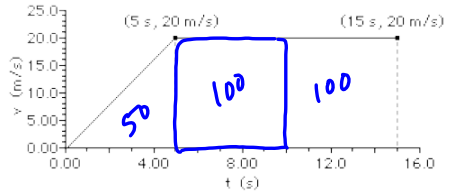
5-15 s: 0

d. Determine the displacement (area) of the car during each of the two parts of its motion.

0-5 s: $\frac{1}{2}bh = \frac{1}{2}(5s)(20\ m/s)$ $\Delta x = 50\ m$

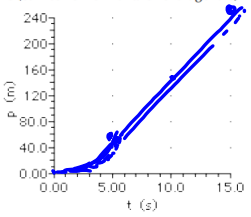
5-15 s: $bh = t(v) = (10s)(20\ m/s)$ $\Delta x = 200\ m$

Consider the following graph of a car in motion. Use the graph to answer the questions.



e. Fill in the table and sketch position-time for this car's motion. Give particular attention to how you connect coordinate points on the graphs (curves vs. horizontals vs. diagonals).

Time (s)	Pos'n (m)
0	0
5	50
10	150
15	250



PRACTICE

- Unit 3 Practice Problems (6-9)
- Worksheet
- Worksheet #2