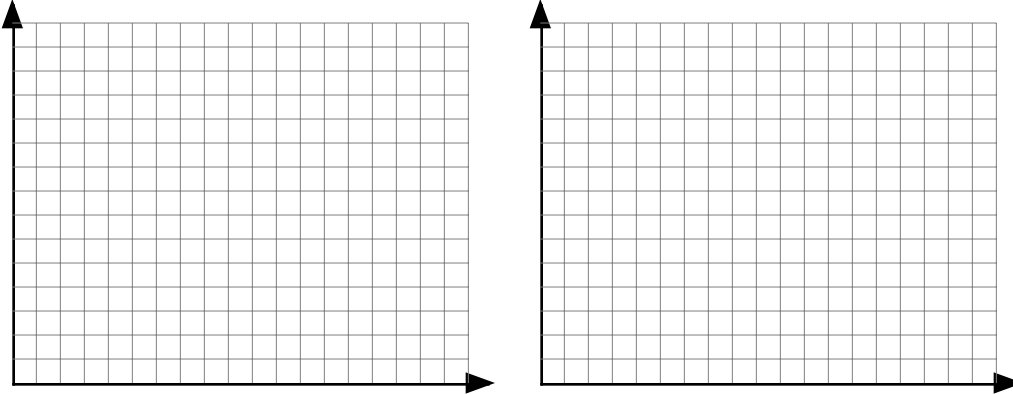


Graphical Velocity & Acceleration

Date	Hr
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Car A starts from rest and the following data is taken for distance covered over time. Draw graphs of distance verse time and velocity verse time for for the data.

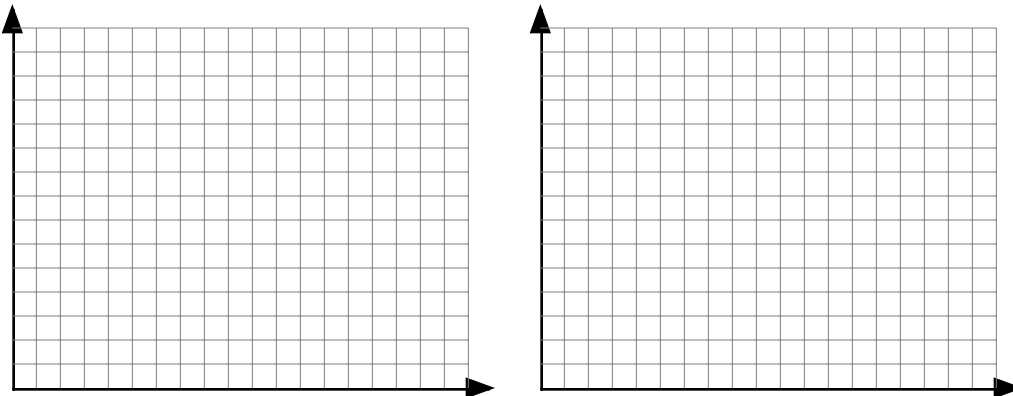
<u>t (s)</u>	<u>x (m)</u>	<u>v (m/s)</u>
0	0	0
1	15.0	15.0
2	30.0	15.0
3	45.0	15.0
4	60.0	15.0
5	75.0	15.0



*What does the slope of a **x** vs. **t** graph represent?

Car B starts from rest and the following data is taken for distance covered over time. Draw graphs of distance verse time and velocity verse time for for the data.

<u>t (s)</u>	<u>x (m)</u>	<u>v (m/s)</u>
0	0	0
1	2.5	5.0
2	10	10.0
3	22.5	15.0
4	40	20.0
5	62.5	25.0

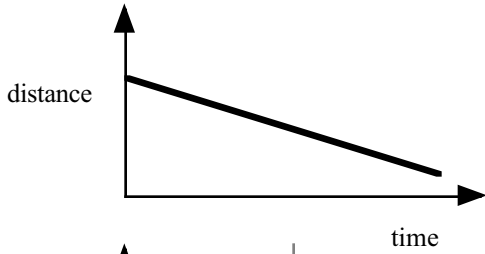


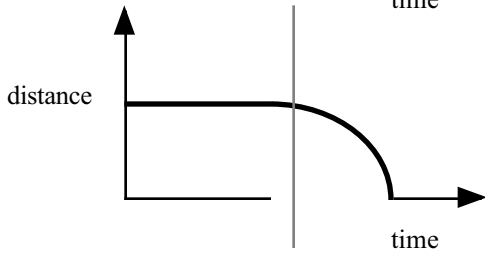
*What does the slope of a **v** vs. **t** graph represent?

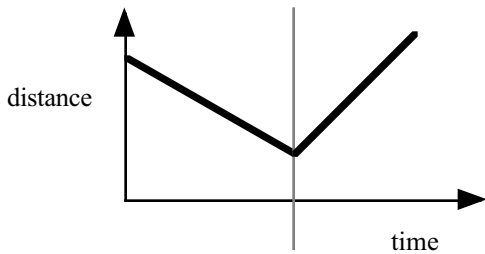
Analysis:

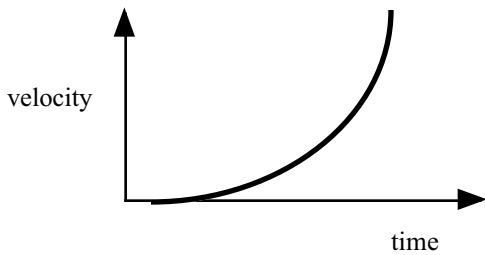
- 1.) What is the shape of the distance v. time graph of car A (constant speed)?
- 2.) What is the shape of the velocity v. time graph of car A (constant speed)?
- 3.) What is the shape of the distance v. time graph of car B (constant acceleration)?
- 4.) What is the shape of the velocity v. time graph of car B (constant acceleration)?
- 5.) At what time will car B pass car A (hint: draw the graphs on the same axes and determine when they cross)?

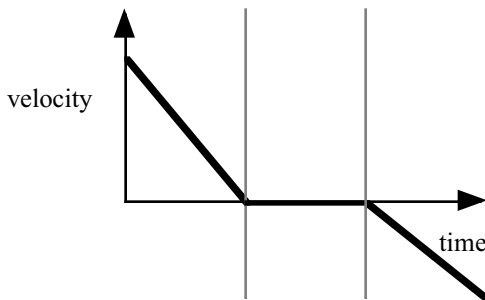
The following graphs represent the motion of various objects. Analyze the graphs and describe the motion on each interval. Give an example of from real life that each graph could represent.

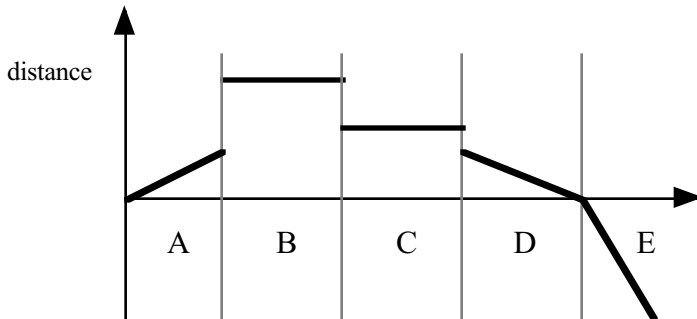












EXTRA: Can you draw a corresponding v vs. t graph for each d vs. t graph? Vice-versa? Can you draw an a vs. t graph to correspond with the graphs above?