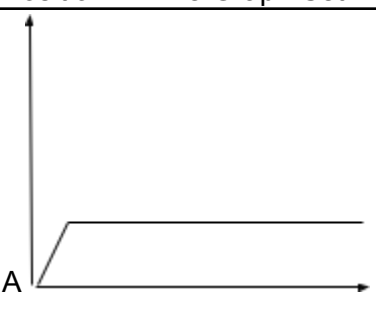
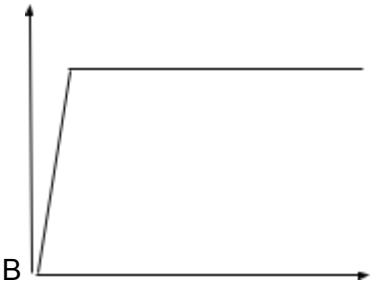


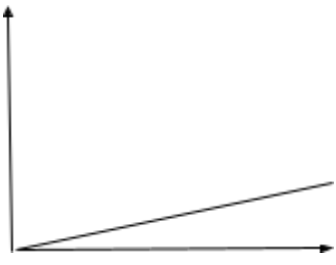
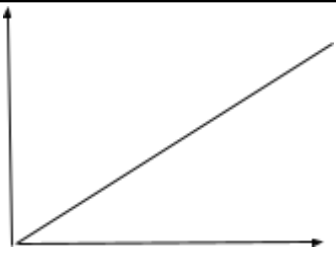
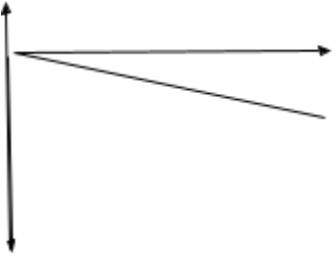
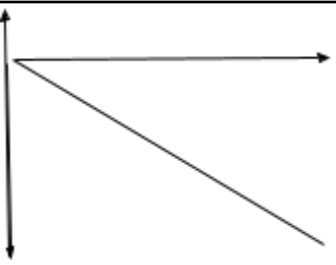
SPH 3UO Activity: Describing d-t Graphs Names: _____

This activity will be done with the use of ~~Capstone~~ software or [sparkvue](https://sparkvue.com/) (now free online)
 Use a smart cart to make graphs similar to each of the following sets of position – time graphs. Set your software up to simultaneously create the corresponding velocity – time graph. **Draw** in the pattern of what it looks like in the table. **Describe** how the cart moved to make the graphs.

Position – Time Graph Set 1	Velocity – Time Graph	Description (how to make this)
 A		
 B		

1. a) Describe the motion of an object that appears as a horizontal line on a position – time graph.

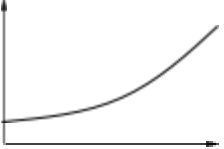
b) What must a person do to produce graph B instead of graph A?

Position-time Graph Set 2	Velocity – Time Graph	Description
 C		
 D		
 E		
 F		

2. a) Describe the motion of an object that appears as a straight slanted line on a position – time graph.

b) What is different about the motion that produces graph D as compared to the motion for C?

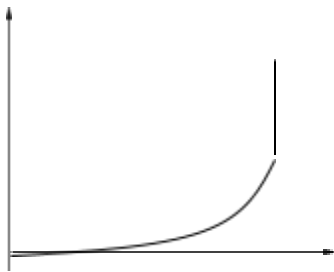
3. Compare and contrast the motions used for graphs D and F.

Graph set 3	Velocity – Time Graph	Description
G 		
H 		

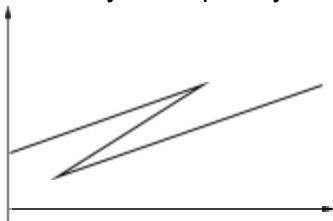
4. Describe the motion of an object that appears as a curve on a position – time graph.

5. Compare and contrast the motions used for G and H.

6. Examine the graph shown below. Can this position – time graph be produced by a detector? Try it! Explain your reasoning.



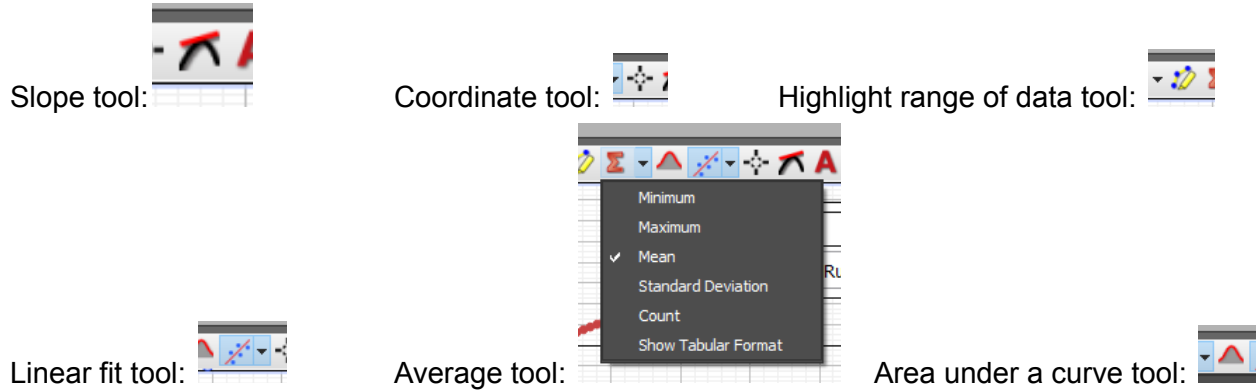
7. Examine the position – time graph shown below. Can this position – time graph be produced by a smart-cart? Try it! Explain your reasoning.



If using Capstone:

Before you finish the lab, try applying each of these tools from the motion software (capstone/sparkvue, etc);

Analysis tools:



1. Give a brief explanation of what each tool does;

If using Sparkvue:

Before you finish the lab, try applying each of these tools from the motion software (capstone/sparkvue, etc);

Analysis tools:

