Aca. Physics P-T Graphs Online Name: \_\_\_\_\_\_\_\_\_\_\_\_\_

Directions:

1. Go to the physics classroom website.
2. Click on physics tutorials.
3. Click on 1-D kinematics.
4. Scroll down to Lesson 3: Describing motion with position-time graphs
5. Click on a: The meaning of shape for a P-T graph.
6. Scroll down unit you reach the Investigate! section.
7. Plug the following values into the graph maker. Once the graph is made, answer the questions.
8. Fill in all missing boxes using the information given:

|  |  |
| --- | --- |
| Slope (velocity) = \_\_\_\_\_\_\_\_\_\_\_\_\_ | Initial Position (m): ­120  Final Position (m): 500 |
| Time (s): 8 | Equation of the line in  slope-intercept formula:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Make a sketch of the graph: | |

|  |  |
| --- | --- |
| Slope (velocity) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Initial Position (m): 450­  Final Position (m): 100 |
| Time (s): 20 | Equation of the line in  slope-intercept formula:  P = -17.5 \* 20 + 450 |
| Make a sketch of the graph: | |

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| --- | --- |
| Slope = 1,000$/yr | Initial Salary ($): ­40,000  Final Salary ($): 100,000 |
| Time (yrs): \_\_\_\_ | Equation of the line in  slope-intercept formula:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Make a sketch of the graph: | |

|  |  |
| --- | --- |
| Slope (Z/M) = 125 | Initial Position (Zills): \_\_\_\_\_\_­ |
| Time (Marps): 20 | Equation of the line in  slope-intercept formula:  P = 125 \* 20 |
| Make a sketch of the graph: | |

VIII: “X” out of the graph maker.

IX: Just below the graph maker is the Interact! Section.

X: Click on Graphs and Ramps.

XI: Choose launch interactive.

XII: Only choose from the distance vs. time column.

XIII: Complete all 7 situations.

XIV: Sketch the graph and the ramp for each situation.

1. Constant Speed
2. Speeding up
3. Slowing down
4. Steady, then changing speed
5. Speeding up, then slowing down
6. Slowing down, then speeding up
7. Random challenge