Physics 100 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Spool Tractor Activity 3

1. Before you begin, read #1 in the directions. You may want to create a trend line in Excel. After you decide whether to draw your own trend line or have Excel do it for you, **print a full-page graph showing only your spool tractors' velocity vs time**.  Complete the following on the graph sheet.
2. Fit a smooth curve to your graph (if you do not already have one). Use your trend line to complete the remainder of the steps.
3. Use the symbols +, -, and 0 to indicate all areas of positive acceleration, negative acceleration, and zero acceleration.
4. Use an arrow to label the point of maximum velocity and write that velocity.
5. Show and label calculations for your tractor's average acceleration during the time period when it was speeding up.
6. If your tractor slowed down at the end, show and label calculations for your tractor’s average deceleration during that time period. When you are showing your work, clearly indicate both the change in velocity and change in time.
7. Label the interval(s) of maximum positive acceleration. Explain how you can tell these show maximum acceleration.
8. If the graph shows that your car slowed down, label the interval(s) of maximum negative acceleration.
9. Label the intervals(s) of minimum acceleration (either positive or negative).

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