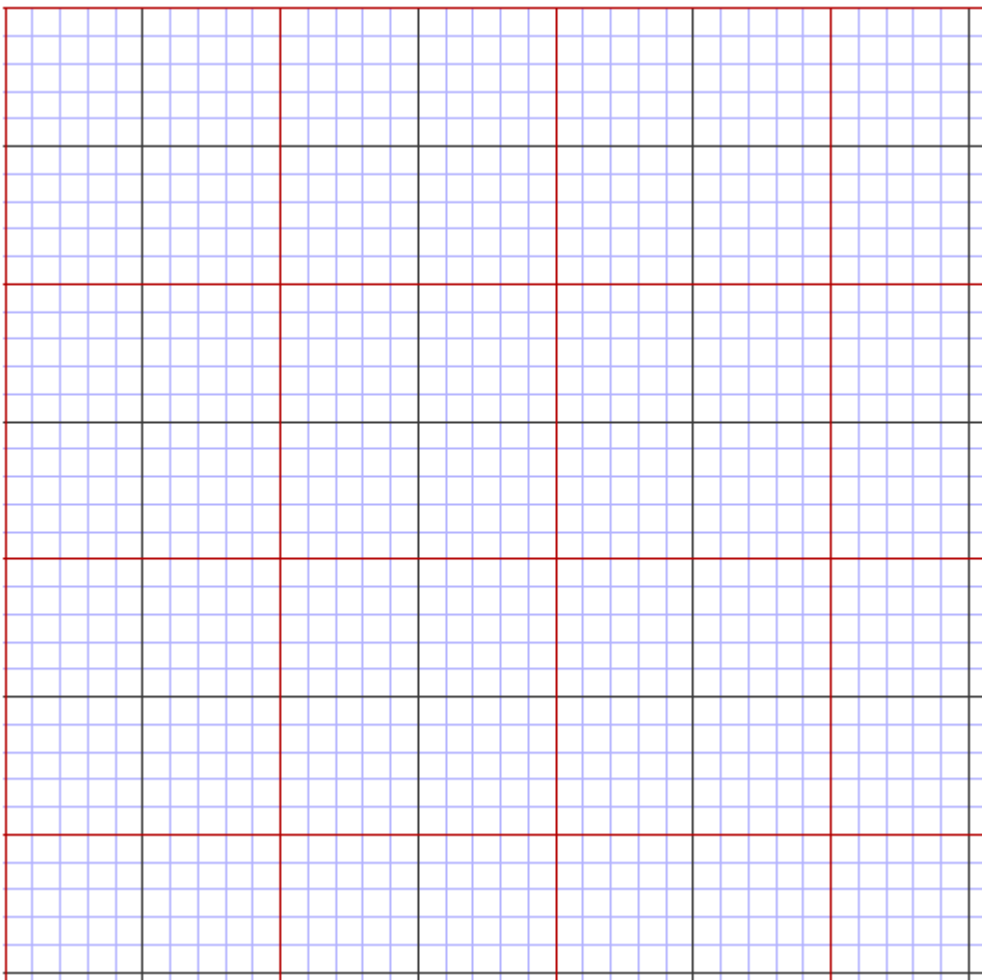


**Procedure:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Table 1:** Measurements of position for a uniformly accelerated cart using a ticker tape timer

Position (cm)	0.0										
Time (s)	0.0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50

**Graph 1:** Position vs. Time graph of a uniformly accelerated cart



1) Draw **three** tangents on the curved line and calculate the slope of each. **Show full calculations in this box.**

2. What does the slope of each tangent mean? \_\_\_\_\_

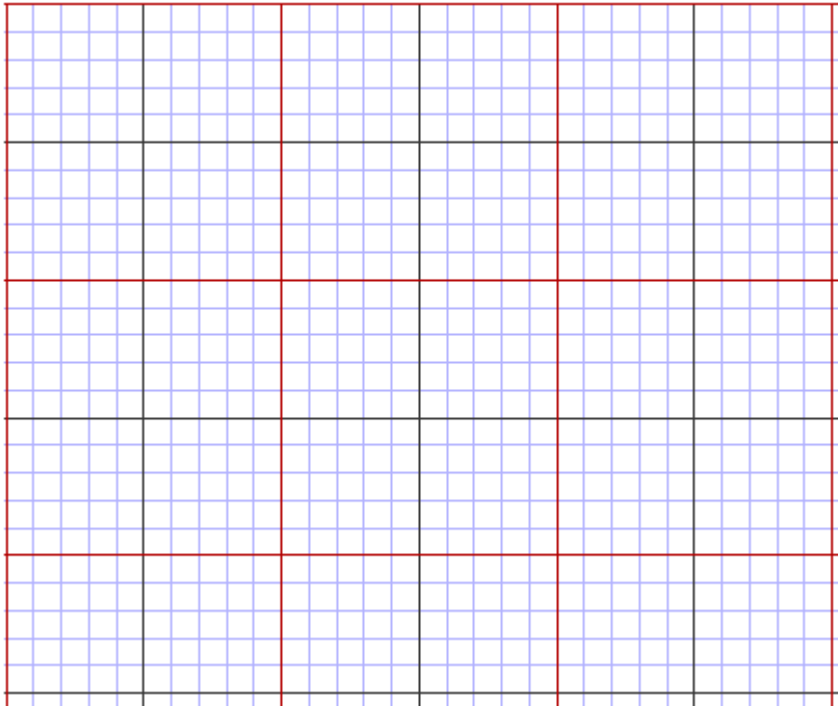
3. What are the units for the calculations of each tangent? \_\_\_\_\_

4. Please place the information gathered from the tangents drawn in graph 1 in the table provided. **Plot a Velocity vs. Time graph** using this information.

Table 2: Calculations of tangents from graph 1

Velocity (m/s)			
Time (s)			

**Graph 2:** Velocity vs. Time graph of a uniformly accelerated cart



5. Calculate the **slope** of the line of best fit in graph 2 below.

6. Calculate the **area** underneath the line of best fit.

7. What does the **slope** of the line of best fit mean in graph 2? \_\_\_\_\_

8. What does the **area** underneath the line of best fit mean in graph 2? \_\_\_\_\_

9. How could this experiment be improved? Where there any sources of error? Explain.

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**Conclusion:**

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