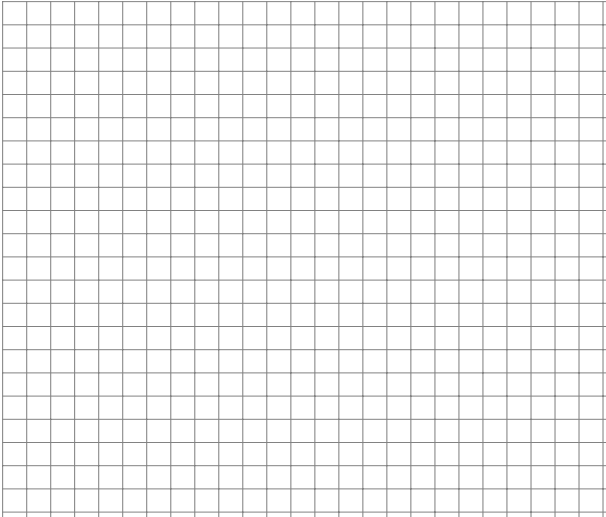
**Unit 2 - Worksheet 1:**

**Buggy Lab Data Analysis**

1. Label and fill in the table here with your buggy lab data.

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1. On the grid below draw and label a set of axes and plot your data points. Make them dark and visible. Remember to use the entire space.
2. Draw a line of best fit for your data. Does it make sense for your line of best fit to go through (0 s, 0 cm)? Explain why or why not.
3. Calculate the rate of change of your line. Circle the spots on the line you used. Show your work and include units of measurements.
4. What position was your buggy in 4.5 seconds after it started? Explain how you know.
5. If your buggy continued to move for 10 seconds past your last measurement, at what position would you predict your buggy to be? Explain your reasoning.
6. Choose two other times and identify what position values are expected based on your line. Do any of these points differ from your measurements? What does this mean?
7. Try to identify a pattern in the way you determined the example points in questions 5 - 7. Write a mathematical equation that you could use to calculate the position of your buggy at **any** time during its motion. Use words like “position” instead of “y”, and “time” instead of “x”.