Paragraph lab questions   Name: _____

RQ: What is the relationship between the width and height of a paragraph?
1. Hypothesis: Make a hypothesis about what the relationship should be, include a graph and some reasoning as to why you think that. Use width as the x-variable.

2. Procedure: Determine with your partner how you will measure your paragraphs. Be SPECIFIC. What things about your paragraphs make it kind of hard to decide how tall/wide a given paragraph is? What are exceptions you have to deal with, and how will you deal with them? Your procedure should allow someone to measure the paragraphs in the same way as you did, and get answers that are the same within your uncertainty.

3. Collect your data: What is your uncertainty for height and width? Are they the same? Explain the choices you make, then collect your data, recording it in a table. Graph your data!

4) Try these fits:
i) Linear, ii) quadratic, iii) cubic, iv) inverse, v) inverse square
a) Which fits can be ruled out for missing your data drastically?

b) Which fits can be ruled out for unreasonable behavior? Does it do something weird later? Describe what it does that is weird.

c) Which fit would you say is the simplest and best fitting? Why? Record your equation.

d) With that best fit, what limitations would you say this mathematical model has? What is something weird that this model would predict? What is something about paragraphs that isn't captured by the equation?

5. Write a justified explanation for what the coefficient(s) in your fit represents.