

Growing Grass Project – Follow Up Questions

Directions:

PART 1 - Create your graph

- Choose an appropriate scale for your graph.
- Label the axes with titles and units.
- Neatly plot the points on the points from your data table on the graph.

PART 2 - Analysis of your data (Answer in FULL SENTENCES)

1. How many days did it take before your grass started to grow? (1 mark)
2. Describe how you determined the height on the weekends? (2 marks)
3. What was the height of your grass on DAY 7? (1 mark) Circle this point on your GRAPH. (1 mark)
4. How many days did you record your grass's growth? What was the height on the last day? (1 mark)

5. Determine the average RATE of growth. Show your calculations and use the formula: $G = H / T$
(3 marks)

6. Do you think that the answer calculated in the previous question is a valid growth rate? Why or why not? Fully explain your answer. (2 marks)

7. What was the first day that you observed the grass? How many days did you see growth? (1 mark)

8. Draw a "line of best fit" on your graph from the first day of growth to the last day of growth.
Use a ruler. (1 mark)

A line of best fit (or "trend" line) is a straight line that best represents the data on a scatter plot. This line may pass through some of the points, none of the points, or all of the points.

9. Draw a TINY STAR (*) at the top and bottom of your line of best fit. State the coordinates (x,y) of the location of both points here. (2 marks)

10. Use the coordinates from the previous question to find the SLOPE of the line of best fit. (3 marks)

Recall – Slope = (y change) / (x change)

11. ESTIMATE where your line would cross the y-axis. This is called the **y-intercept** and the process of finding it is called EXTRAPOLATING (and yes, it will be a negative value for this graph). (1 mark)

12. Write an equation for the line that describes the growth of your grass. Use $y = mx + b$ format. (2 marks)

PART 3 – Self Assessment

1. Did you enjoy this project? Why or why not?

2. What is one thing that you learned from this project?

3. Is there anything you would have liked to do differently?

PART 4 - RUBRIC

For each category, give yourself a mark in the student column based on the description provided.

	Student	Teacher
<u>Plant Care (5 marks)</u> - checked on daily - watered when needed - height correctly measured using a ruler		
<u>Data Table (5 marks)</u> - values recorded each day - weekends estimated reasonably - neatly completed		
<u>Graph (5 marks)</u> - axes labelled with an appropriate title (and units) - scale chosen carefully and neatly labelled - points have been neatly plotted in pencil and are easy to read		
<u>Analysis (20 marks)</u> - the follow up questions from part 2 have been completed to the best of your ability and answered using full sentences. - your teacher will mark these for accuracy (no student mark here)		
<u>Self Assessment (5 marks)</u> - the questions have been answered in full sentences - thoughtful detailed feedback has been provided		