

**MAKING A GRAPH, part 2**  
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22b

- 1) Draw the X and Y coordinates, three spaces away from the edge of the bottom and left edge of the page. On a standard lab notebook, this will leave an area 35 x 40 squares for the graph.
- 2) Determine the value of a single "square":
  - a) For the X axis:
    - i) Divide the range of X (highest value - lowest value) by the number of squares available (usually 35).
    - ii) Round up the value per square to the next decimal multiple of 1, 2, 5 or 10.
    - iii) Enter the numbers along the X axis every 2 or 5 squares (see example at bottom of page.)
  - b) For the Y axis:
    - i) Divide the range of Y (highest value - lowest value) by the number of squares available (usually 40).
    - ii) Round up the value per square to the next decimal multiple of 1, 2, 5 or 10.
    - iii) Enter the numbers along the Y axis every 2 or 5 squares (see example at bottom of page.)
- 3) Plot the data by entering a dot at the appropriate spots according to the coordinate values.
- 4) Circle (or square, etc) around the dot to protect it.
- 5) Connect the circles (*not* the dots) with a line to generate the curve.
- 6) Enter the descriptions:
  - a) Fully descriptive TITLE at the top of the page
  - b) Label the coordinates, including units
  - c) Identify the nature of the data: circles = "A", squares = "B", etc.
  - d) Give the resulting conclusion of the graph in a few words
  - e) Cross reference to the source of the data you have plotted on line 6 of the notebook.

Examples of assigned values per square:

|.....|.....|.....|.....|.....|.....|.....|.....|  
0 1 2 3 (one square = 0.2)

|.|.|.|.|.|.|.|.|.|.|.|.|.....|  
0 1 2 3 4 5 6 7 8 9 10 (one square = 0.5)

|.....|.....|.....|.....|.....|  
0 5 10 15 20 (one square = 1)

|.....|.....|.....|.....|.....|.....|  
0 5 10 20 30 (one square = 2)