5 Steps in Drawing a Graph

1. Choose simple scales.

For example:
1 large square = 1 newton (1 N)
or
1 large square = 2 N, or 5 N, or 10 N

But never choose an awkward scale,
like 1 square = 3 N or 7 N

Choose a scale that will make your graph use most of the sheet of paper.

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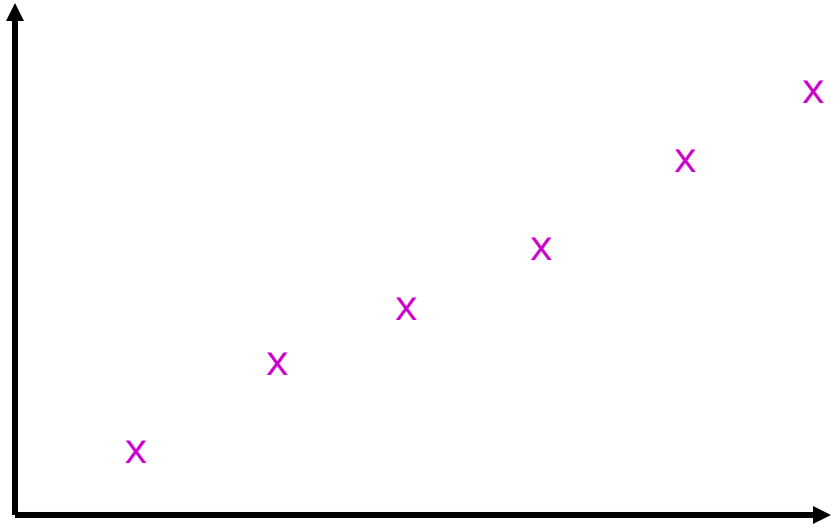
2. Plot the points neatly.

Usually you need 5 or more points for the graph.



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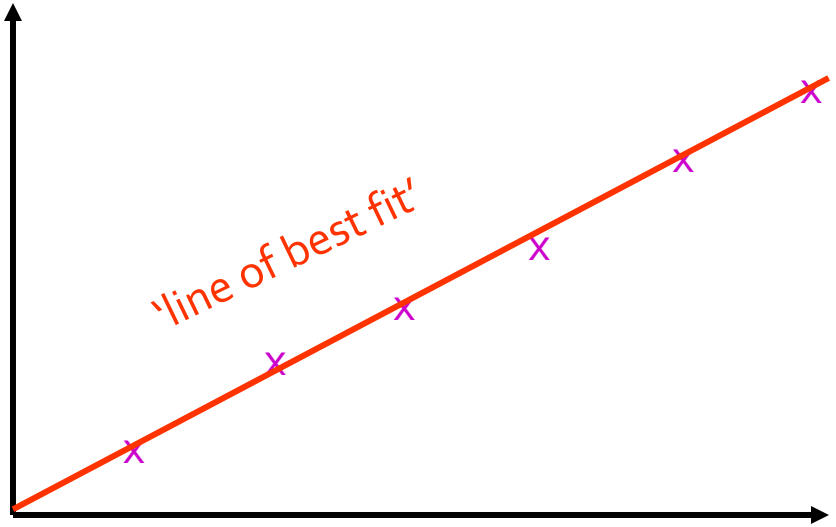
3. If the points form a straight line…

…draw the best straight line through them



Check that it looks the **best** straight line.

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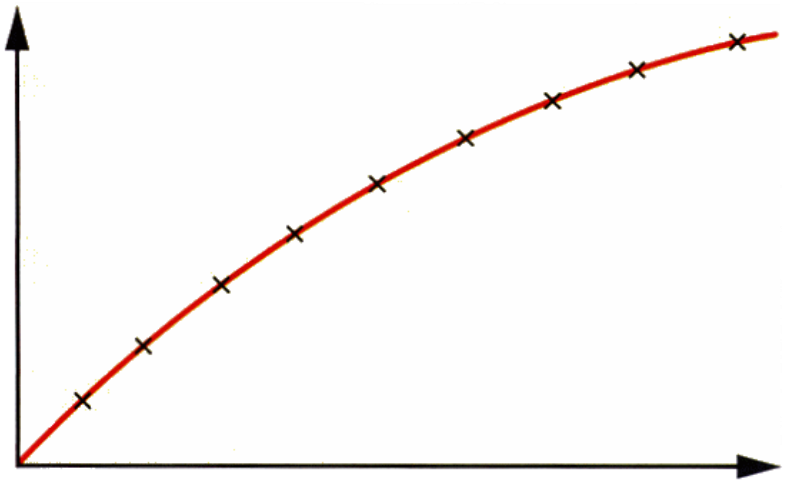
4. If the points form a curve…

…draw a free-hand curve of best fit



Do **not** join the points like a ‘dot-to-dot’.

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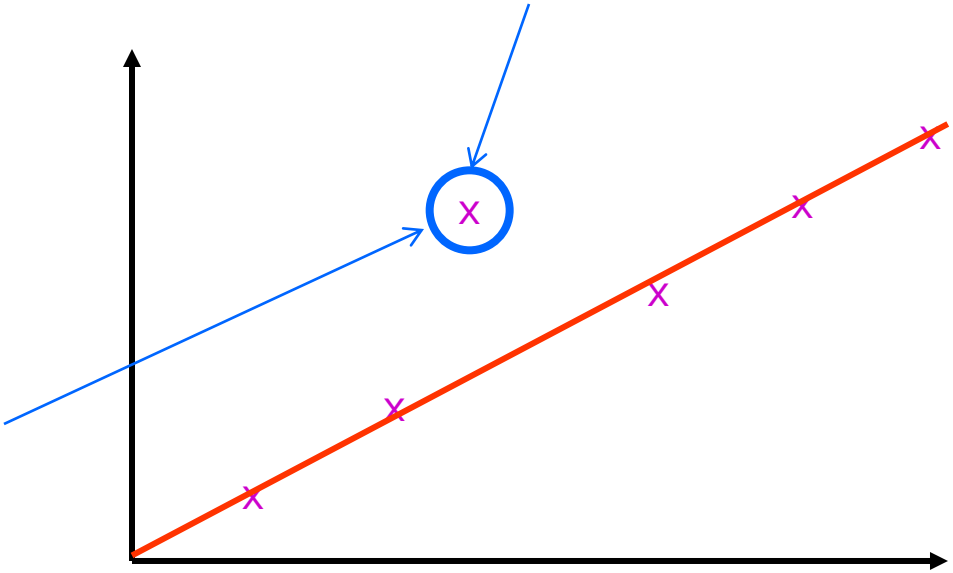
5. If a point is not on the line…

…use your apparatus to check this measurement again

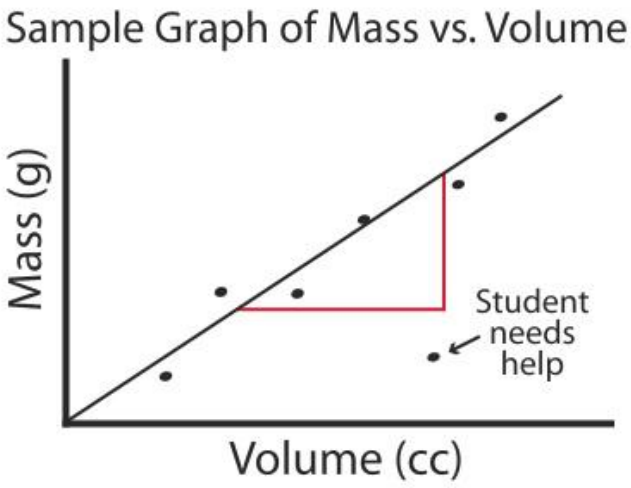


This is called an anomalous point.

You can decide to ignore anomalous points.

Calculation of the Slope

- The ratio of rise over run is constant for straight-line graphs and is called the slope.
- It does not matter which points are used to compute the slope, but it is important to note that the points used to compute the slope of a line are points on the line, not data points.



A Complete Graph

- Title
- Labels with units
- Slope Calculations on the graph itself.