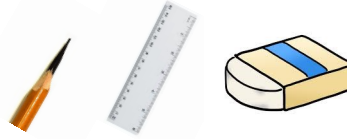# How to draw a great graph.

Follow these 10 steps *every time* you draw a graph to make sure you get the top marks!

1. CHECK you have: A *sharp* pencil, a ruler and an eraser.

2. BEFORE your pencil touches the paper, **CALCULATE** your scales and *imagine* where you will draw the axis. Do this by:

3. COUNTING the number of squares you can use for the x, and the y, axis and looking at the biggest numbers in your data-table. Make the graph as big as possible. This Makes it easier to draw and it is more accurate.

4. DIVIDE the biggest number on the table, by the number of squares, for each axis. This will give you a rough guide of how many units *each* square will be. You can round this down to the nearest number to make plotting your points easier.

5. DRAW your axis by placing your ruler *precisely* on the line and moving your pencil across it in *one smooth motion*.

6. LABEL the axis with what they represent (distance, time etc.) and the units (m, s etc.) .) Make sure the scale has evenly spaced values, (0, 10, 20 or 0, 50, 100 for example) with equal numbers of squares for each division.
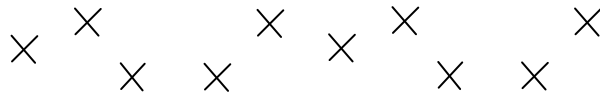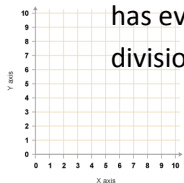
**7. PLOT THE POINTS** by placing a small, neat cross X *exactly* where the lines cross from each axis. Plotting points with circles or blobs is less accurate as the lines could cross anywhere in the circle. You do not need to draw lines from the axis and you might need to do this on different parts of the graph later and this will make it confusing!

8. CONNECT THE POINTS on distance-time graphs, neatly with a ruler. If there is a direct correlation. Use a line of best fit. The 'line of best fit' is a line that goes roughly through the middle of all the scatter points on a graph.
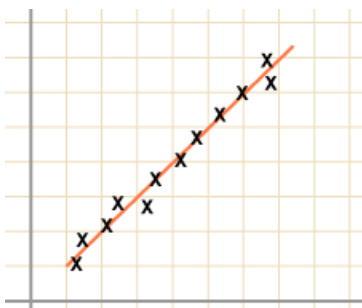
The **line of best fit** is drawn so that the points are evenly distributed on either side of the line. When drawing the line of best fit, use a transparent ruler so you can see how the line fits between all the points before you draw it.
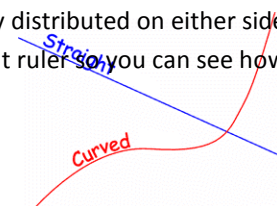
If the points provide a curved graph, visualise how you will join the points, then do it in one *smooth* motion.

9. DOUBLE CHECK you have everything correct: the scale, labels, units, plotted points and neat lines.