Title

What is your graph showing you?

Graph to show.......

Y axis
Dependent Variable

Plotting your points

Use a ruler to help
Always use a pencil
Where the lines cross, you plot you point with a cross.

Checklist

❏ I have labelled my axis
❏ I have included the units I used
❏ I have given my graph a title that explains what it is showing
❏ I have correctly added a scale to my x and y axis
❏ I have plotted my points correctly using a pencil
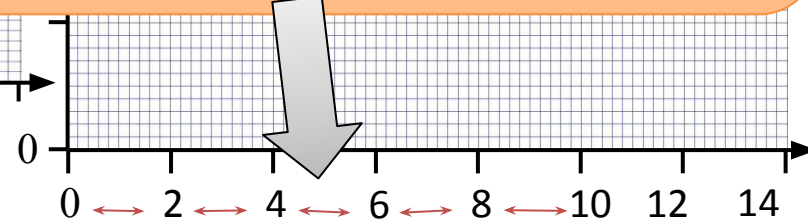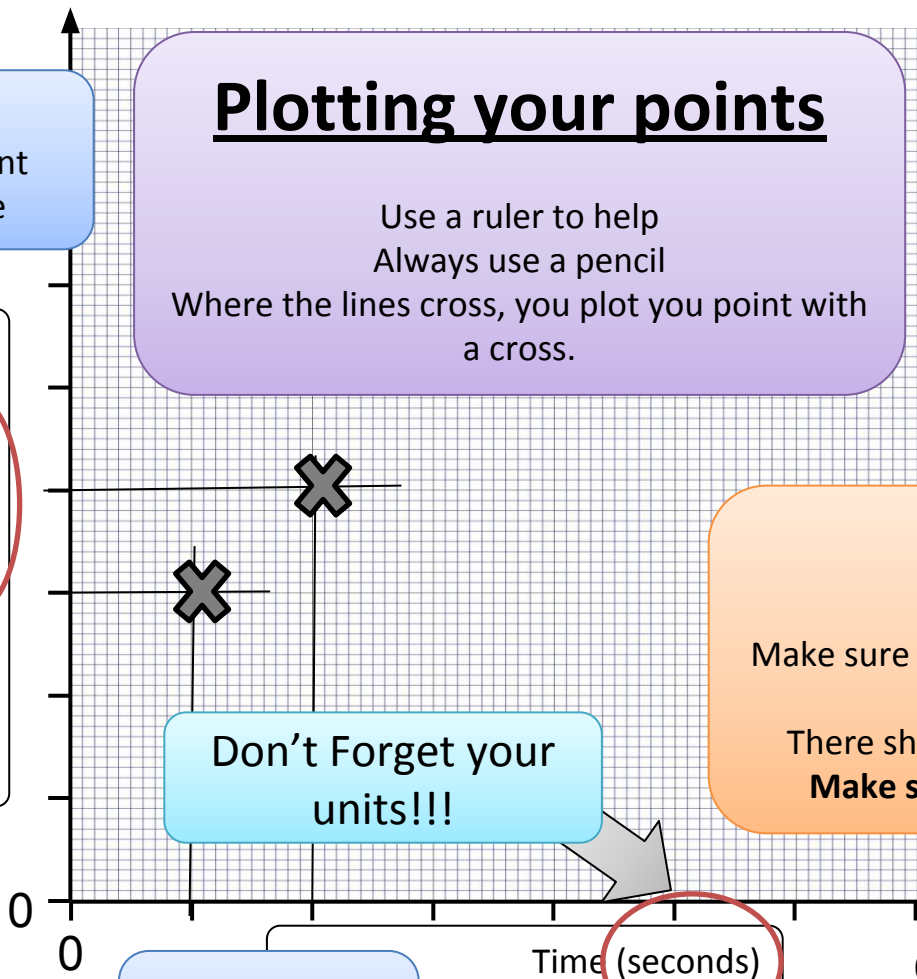❏ I have added a line of best fit

Drawing a Scale

Make sure the same number of squares represents the same amount each time.
There should be the same space between each number.
Make sure your numbers are underneath the dash!!

Temperature(Degrees C)

Don't Forget your units!!!

0

0

Time (seconds)

X axis
Independent Variable

0   2   4   6   8   10   12   14

How to... Plot a Graph

iMat

2.Anomalous Results

Are there any results that do not fit the pattern and are not located near the line of best fit?
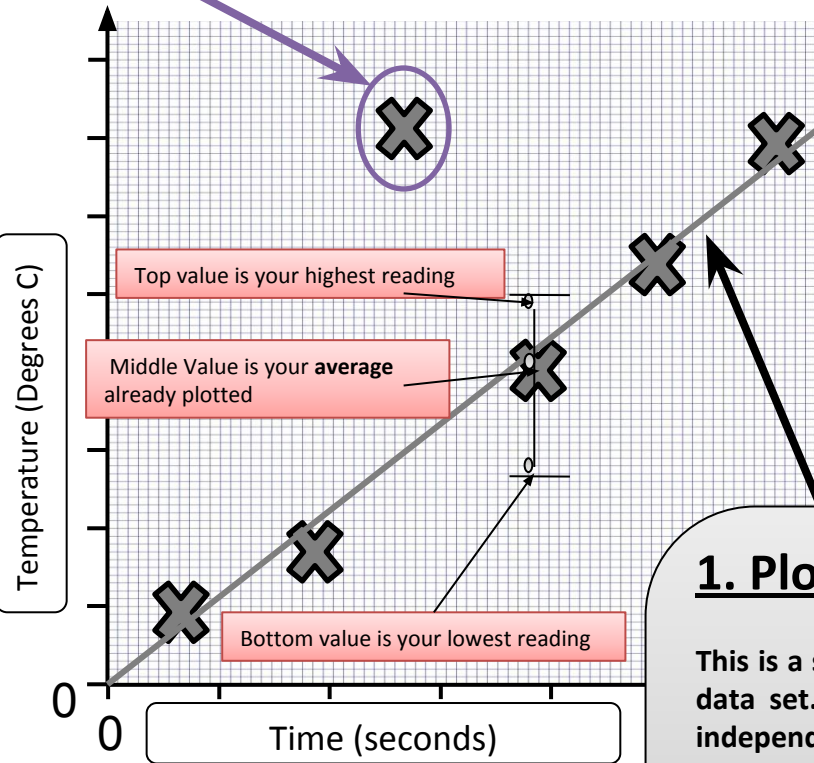
Once you have located them you could:

- **Check you have calculated the average correctly**

- **Think why you have got this result (where might you have made a mistake?)**

- **Remove the data point from your data – you must say why**

- **Repeat that data point if you have time**

Graph to show.......

Temperature (Degrees C)

Top value is your highest reading

Middle Value is your **average** already plotted

Bottom value is your lowest reading

0

0

Time (seconds)

1. Plotting a Line of Best Fit

This is a straight or curved line that best fits your data set. It shows a relationship between your independent and dependent variable.

Always use a ruler and a pencil.

It may not go through all of your points (it isn't dot to dot!) but don't worry, that helps you to find anomalous results!
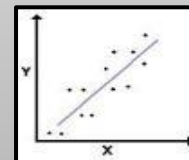
Positive Relationship Line goes up

Negative Relationship Line goes up

Change in Alcohol Use

Services Received
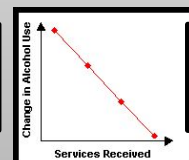
3. Plotting Error Bars

These show how much error there is in your data. To do this you plot your highest and your lowest result for each reading around your average that is already plotted. This gives you a bar around your average.

The *smaller* the bar, the *more reliable* the result as the *less error* you have.

The *bigger* the bar, the *less reliable* the results are, you have *more error* and a larger range.