

SULTAN Graphing



Graphing

- Using graphs is a way that scientists analyze their data when using the scientific method.
- It is important for deciding whether a hypothesis can be either accepted or rejected.

What does **SULTAN** it mean?

- Scale
- Units
- Label
- Title
- Accuracy
- Neatness



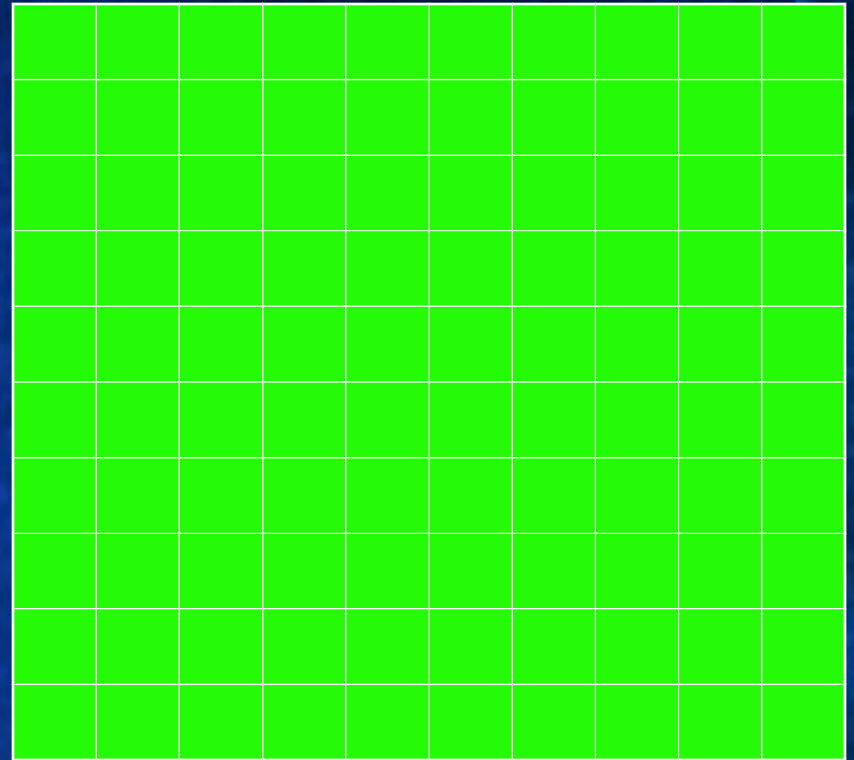
Remember:

- Independent Variable - the variable that we change in the experiment (what you know before the experiment).
- Dependent Variable - the thing that we measure in the experiment (what you don't know before the experiment).

Axes:

- The independent variable is placed on the X-axis of the graph.
- The dependent variable is placed on the Y-axis.

Dependent variable



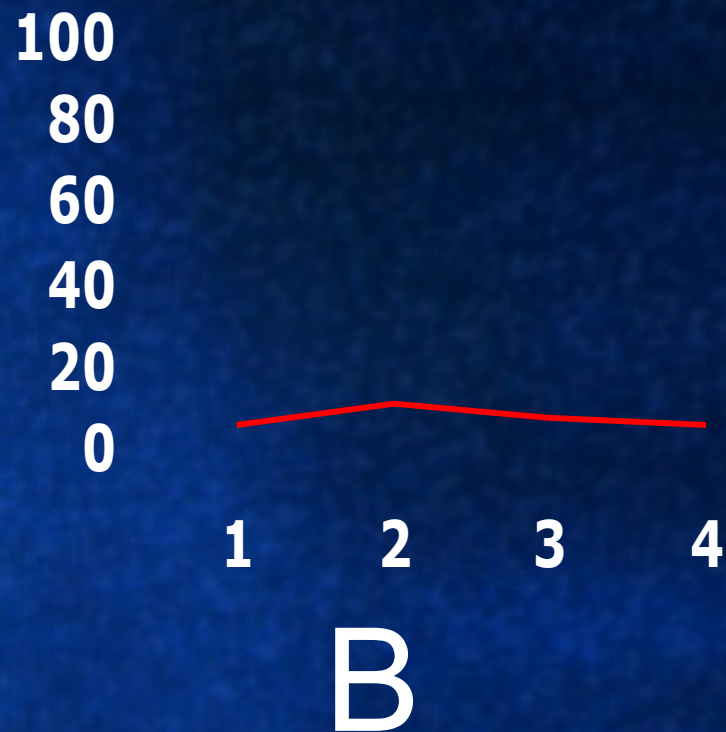
Independent variable

Scale

- Scale is needed to make sure that the information on the graph is readable.
- Your graph must fill nearly the whole area.
- Numbers must be evenly spaced.

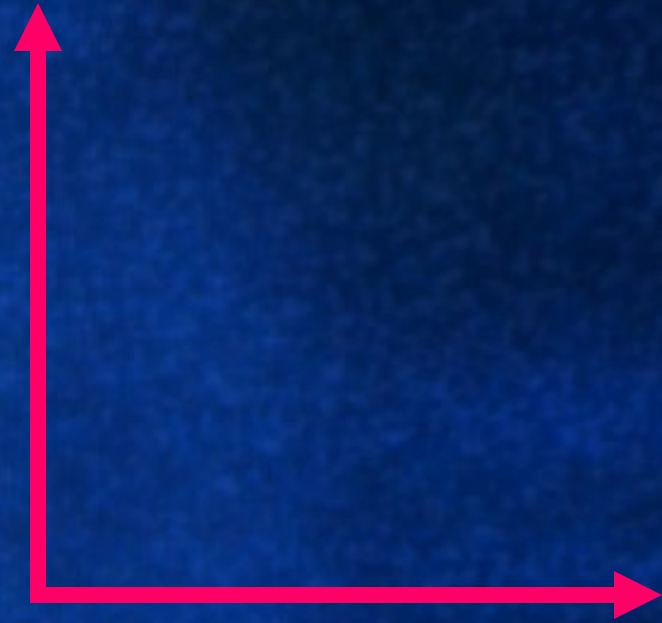


Which of these graphs has the best scale?



Units

- The words or numbers that go on the axes.

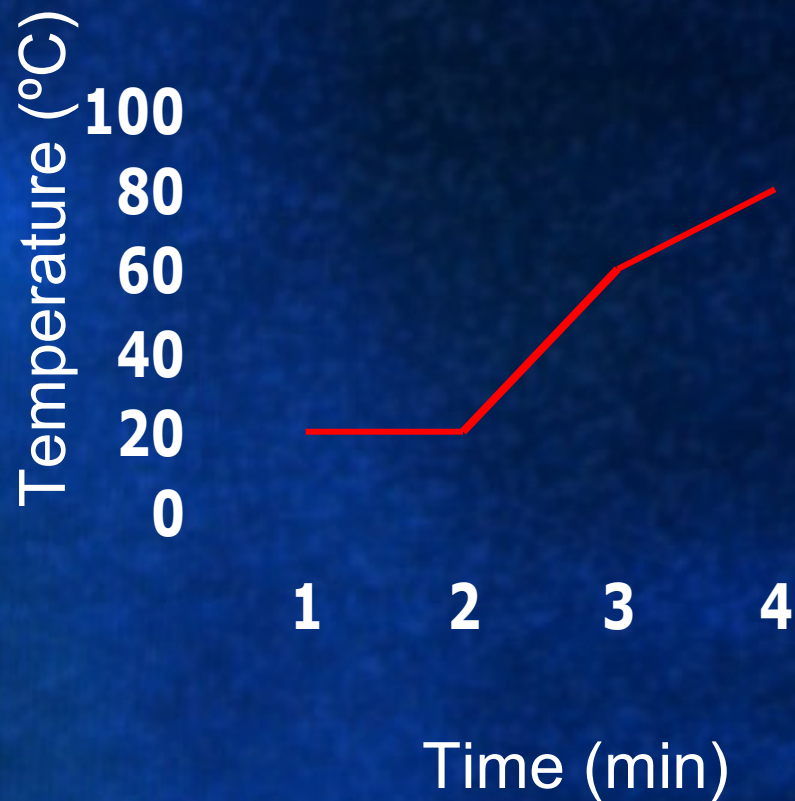


Label

- The labels tell us what we are measuring

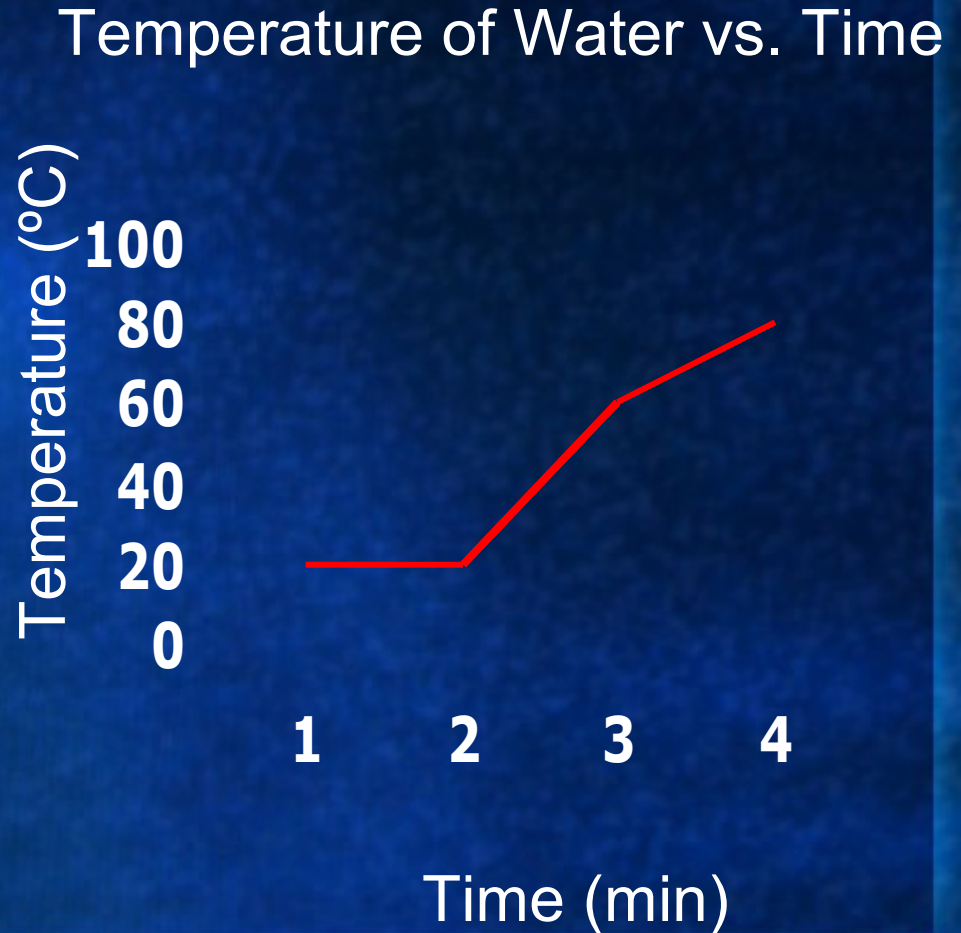
We don't know what is being shown on this graph.

Our independent variable could be many different things like days, weeks, minutes, numbers of people.



Title

- The title tells the reader what the graph shows.



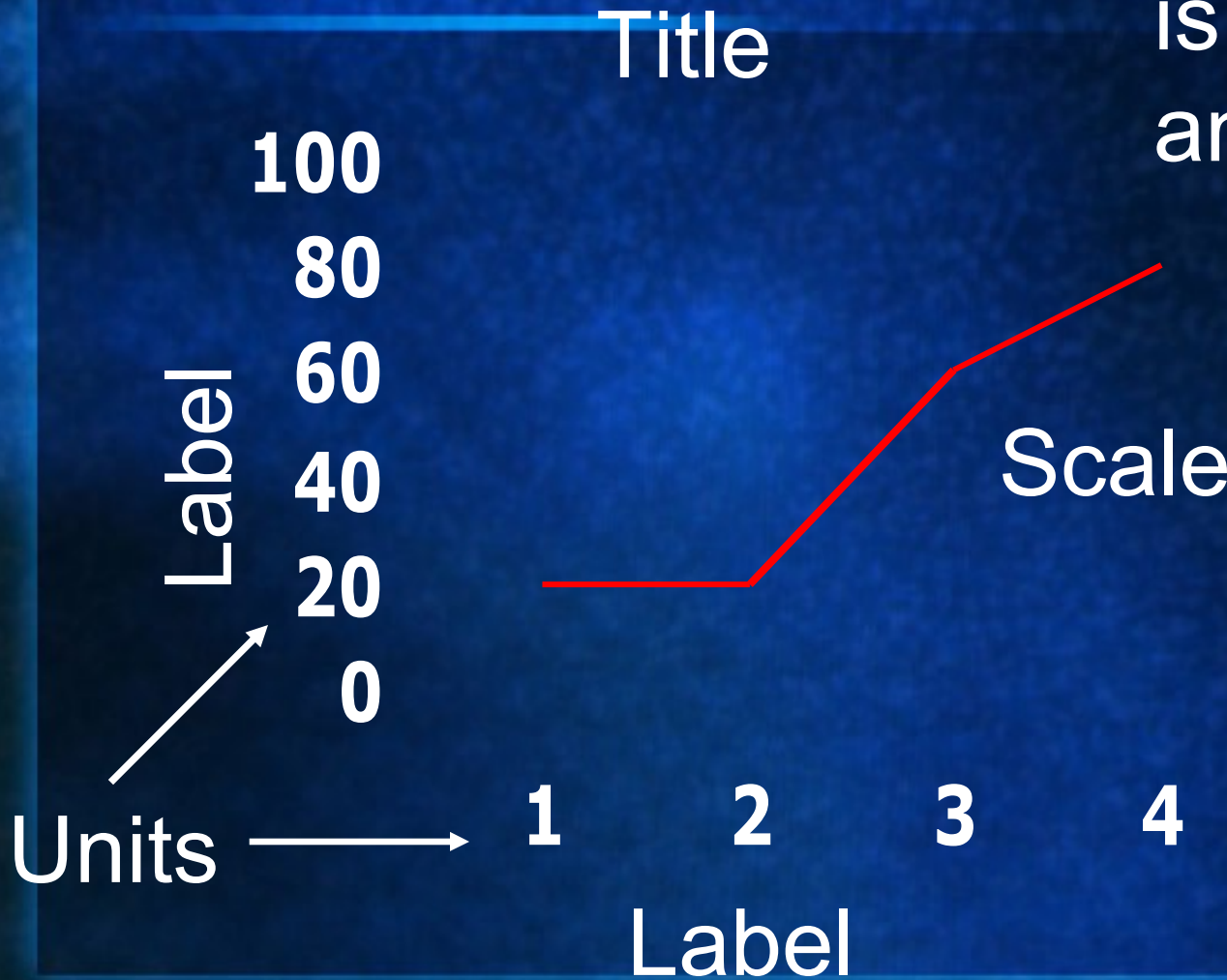
Accuracy and Neatness

- Check your graphs for accuracy and neatness so the reader understands what is being shown.



SULTAN

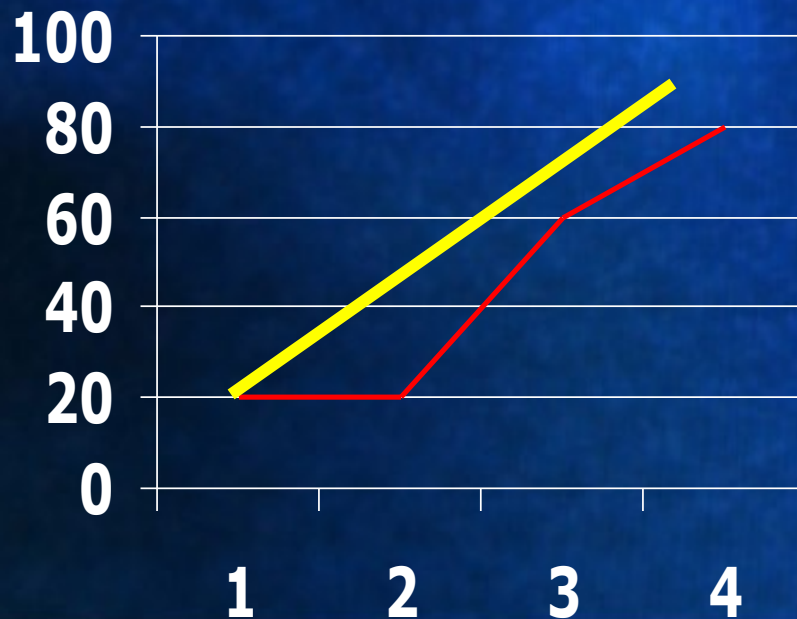
The graph is Accurate and Neat



Legend

 = mile run with power
drink

 = mile run with water



- A graph with more than one set of data needs a legend (key)
- A legend is a place where we identify what the symbol or color means