Graphing Skills Lab

Question: How will the height that a ball bounces over time appear in graph form?

Motivation

What is the point of graphing?

Communication!

We use graphs to communicate our results to other people!

Procedure

Groups of 2, each person hands in their own lab.

You'll be given a bouncy ball, meter stick, and graph paper

You must develop a procedure to measure the height of the ball as it bounces.

Your aim is to record 6 bounces for each trial and do 3 separate trials.

Once you have data come back to discuss graphing

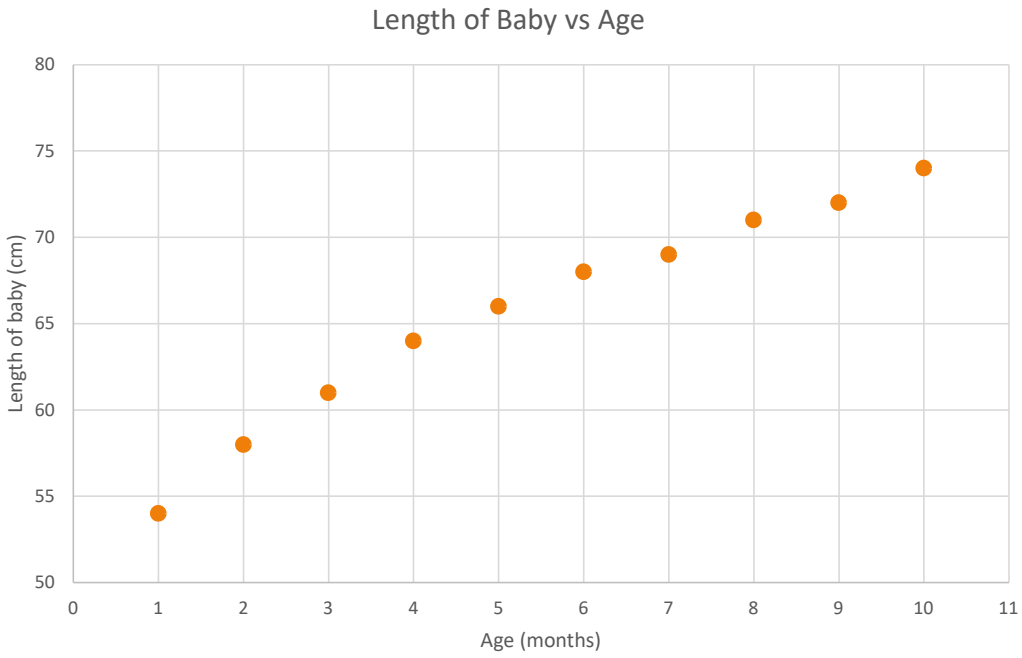
Variables

What are the manipulated, responding, and controlled variables?

Why do we repeat trials?

Graphing

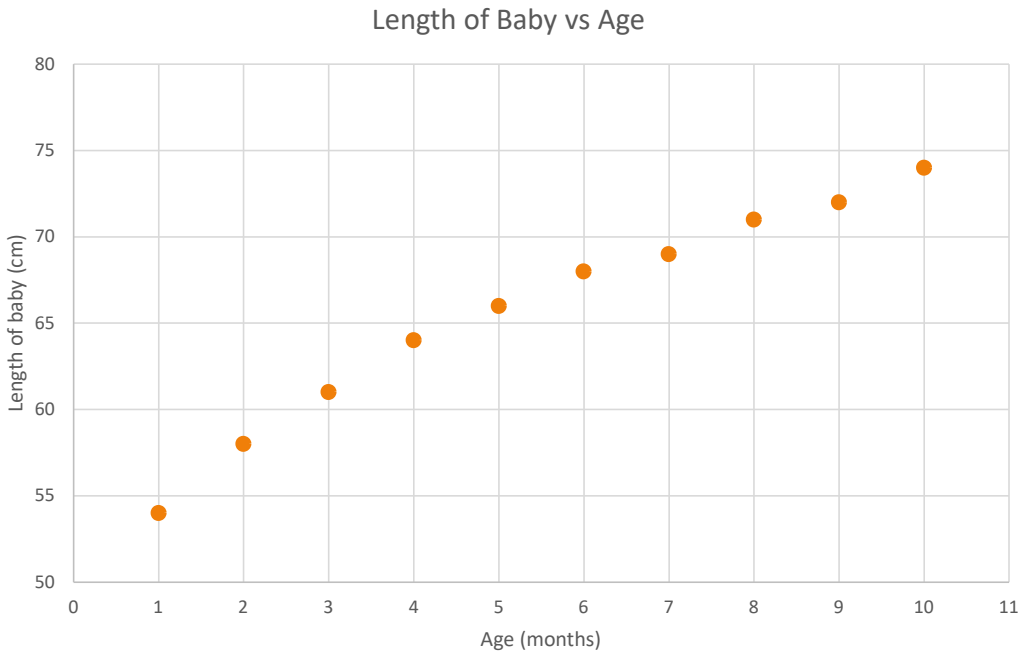
What do we need on a graph to communicate our results?



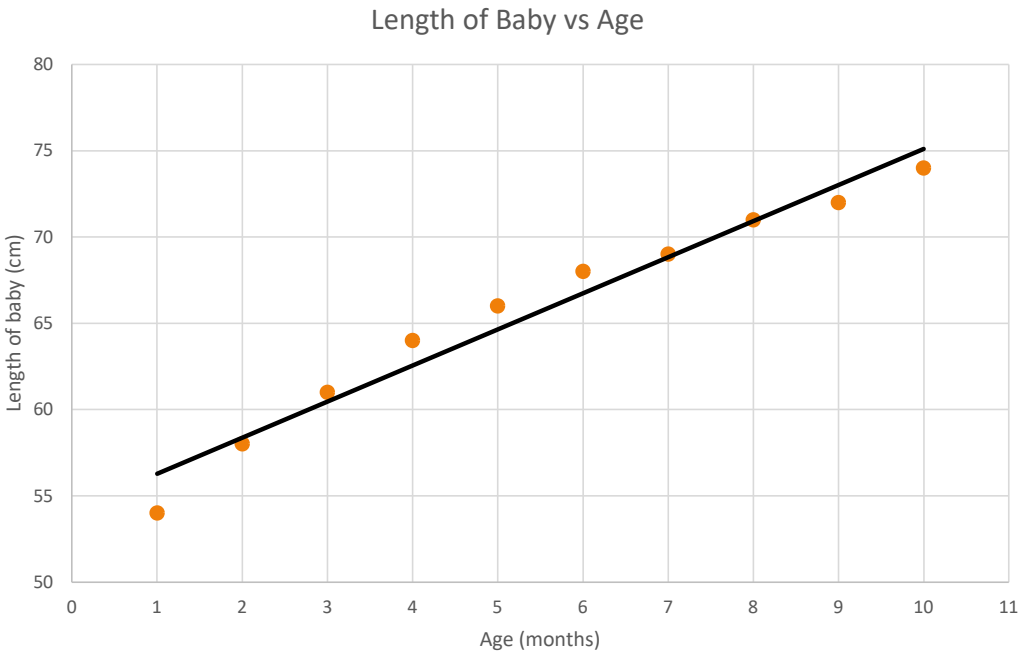
Line of Best Fit

A line of best fit shows the general trend of our data

It should average out the high And low values



Line of Best Fit



Averaging

Averaging helps us get more accurate results by combining the results of multiple trials.

This helps reduce errors due to random chance.

Averaging

To calculate the average:

$$\frac{\text{Trial 1 + Trial 2 + Trial 3 + …}}{\text{Number of trials}}$$

Example,

First bounces were 20 cm, 18cm, 19cm