**Mathematical Modelling**

Maths modelling is where we use mathematical formula and equations, etc to provide a solution to a Real World problem.

**What is** **Mathematical Modelling?**

* Mathematics is a very precise language which helps us formulate ideas.
* Mathematics is a concise language, with well-defined rules.
* All the results that mathematicians have proved over hundreds of years are at our disposal.
* Computers can be used to perform numerical calculations.
	+ (<https://www.mathsisfun.com/data/function-grapher.php>)
* Any formula/equation/etc can be considered a mathematical model.
	+ (e.g. $y=mx+c$ where m is the slope of the line and c is the y-intercept in other words where the line cuts the y-axis)
* Linear Programming is a good example of where we use mathematics concepts, formula, etc to provide valuable information in real world scenarios.

**What objectives can Mathematical Modelling achieve?**

* Developing scientific understanding through quantitative expression of current knowledge of a system
* Test the effect of changes in a system
* Aid decision making, including:-
	+ tactical decisions by managers;
	+ strategic decisions by planners.

**Maths Formulae and Tables** (available on website)





**Geolocation – GPS Coordinates**



