Equations

Equation - A statement that two things are equal, it contains expressions on both sides of the equal sign.
e.g. 5 = 2x + 1

Inverse operations - Used to solve equations. Addition and subtraction are inverse operations. Also, multiplication and division are inverse operations.

Inequality - when one quantity is not equal to another. We use the following symbols:

$\neq$ not equal $\leq$ less than or equal to
$<$ less than
$>$ greater than $\geq$ greater than or equal to

Solution set - the range of values that satisfies a particular inequality.

Formula - a mathematical rule expressed with symbols e.g. f = m + a

The plural of formula is **formulae**

Subject of a formula - the single variable that is equal to everything else.
In the example above force (f) is the subject

Variable – A symbol for a value that we don't yet know, this is commonly represented by a letter such as x or y.

Straight Line Graphs

Origin—A fixed point at which measurements are taken from. On a graph, this is the centre (point (0,0))

Linear graph – Produces a continuous straight line

y = mx + c – This is often the form of a linear graph where m is the gradient and c is the y intercept

Table of Values – When plotting a graph, we often use a table of values to help us generate coordinates that meet a given criteria.

y-intercept – Where a line crosses the y – axis

When we talk about the **steepness** of a line we are referring to its gradient

Lines are **parallel** if they have the same **gradient**
e.g. y = 3x + 4 and y = 3x - 2 are parallel

Horizontal—A line parallel to the horizon
Horizontal graphs are in the form y = n e.g. $y = 5$

Vertical – At a right angle to the horizontal plane
Vertical graphs are in the form x = n e.g. $x = 12$