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Math Terminology

This sheet aims to give students an important grounding in the basic maths terminology and notation.

Number Systems

$\mathbb{N}$ The set of natural numbers

$\mathbb{Z}$ The set of integers

$\mathbb{Q}$ The set of rational numbers

$\mathbb{R}$ The set of real numbers

$\mathbb{C}$ The set of complex numbers

The variants of equals sign

$=$: equals

$\neq$: not equal

$\approx$: approximately equal to

$\geqslant$: greater than or equal to

$\leqslant$: less than or equal to

Algebraic Operations

Operation	Words Used	Example
Addition $(+)$	Sum, total, increase, plus	addend + addend = sum $1 + 2 = 3$
Subtraction $(-)$	Difference, decrease, minus	minuend $-$subtrahend = difference $3 - 2 = 1$
Multiplication $(\times)$	Product, of, times	$4 \times 2 = 8$ factor $\times$ factor = product
Division $(\div)$	Quotient, per, divided by	$4 \div 2 = 2$ dividend $\div$ divisor = quotient

Remark

If the number is not completely divisible by another number, then we are left with a value, which is called remainder.

$$\frac{\text{dividend}}{\text{divisor}} = \text{quotient} + \frac{\text{remainder}}{\text{divisor}}$$

Symbols

$\in$:   Belongs to

$\notin$:   Does not belongs to

$|$:   Such that

∞ :   Infinity

$()$:   Parentheses

$\{\}$:   Braces

$[\,]$:   Brackets

Definitions

■ **Prime numbers** are integers greater than 1 that are only divisible by themselves and 1.

■ **Odd numbers** are the integers that on division by 2 result in a remainder of 1. It is of the form $\mathbf{2n+1}$, where $\mathbf{n}$ is any integer.

■ **Even numbers** are the integers that on division by 2 result in a remainder of 0. It is of the form $\mathbf{2n}$, where $\mathbf{n}$ is any integer.

■ **Rational numbers** are a type of real numbers, which are in the form $\mathbf{\dfrac{p}{q}}$, where $\mathbf{p, q} \in \mathbb{Z}$ and $\mathbf{q \neq 0}$.

Examples

In table below, you will find some examples to learn how to read an algebraic expression.

$1 + 2 = 3$	One plus Two equals Three
$1 - 2 = -1$	One minus Two equals negative One
$4 \times 2 = 8$	Four times Two equals eight
$4 \div 2 = 2$	Four divided by Two equals Two
16×5	The product of 16 and 5
$66 + 92$	66 is increased by 92
$93 \div 32$	The quotient of 93 and 32
$85 - 15$	The difference between 85 and 15
$36 \leqslant 41$	36 is less than or equal to 41
$56 < 10^2$	56 is less than of 10 squared
$\sqrt{4} > 1^3$	The square root of 4 is greater than the cube of 1
5^2	Five sequared or five to the second power
5^3	Five cubed or five to the third power
5^4	Five to the fourth
$\sqrt{3}$	The square root of 3
$\dfrac{1}{2}, \dfrac{1}{3}, \dfrac{1}{4}$	One half, One third, One fourth or quarter
$\dfrac{1}{10}$	One tenth
$\dfrac{5}{6}$	Five sixth or five over six
$10(x + 2)$	Ten times the quantity x plus Two.