

Directed numbers

Directed numbers are numbers that have both a size (magnitude) and a sign (+ or -) that shows their direction or position relative to zero. They include both positive and negative numbers, such as +5, -3, +12.5, and -0.4.

Real-Life Examples:

Temperature:

+20°C is twenty degrees above zero, while -5°C is five degrees below zero.

Money:

Having \$50 (+50) is money you own, while owing \$20 (-20) is a negative balance.

Elevation:

Above sea level is positive (+100 m), and below sea level is negative (-100 m).

Rules for Basic Math

Same Signs:

When you add two numbers with the same sign, add their sizes and keep that sign.

Different Signs:

When you add a positive and a negative number, subtract the smaller size from the larger size and use the sign of the larger number.

Multiplication and Division:

* Two matching signs make a positive result

(+ × + = + or - × - = +).

* Two different signs make a negative result

(+ × - = - or - × + = -).