

Properties of Real Numbers

The properties of real numbers help us simplify math expressions and help us better understand the concepts of algebra.

Commutative Property of Addition

$$a + b = b + a \quad 3 + 7 = 7 + 3$$

Commutative Property of Multiplication

$$c \times d = d \times c \quad 8 \times 5 = 5 \times 8$$

Associative Property of Addition

$$(e + f) + g = e + (f + g) \quad (4 + 9) + 11 = 4 + (9 + 11)$$

Associative Property of Multiplication

$$(k \times l) \times m = k \times (l \times m) \quad (9 \times 4) \times 5 = 9 \times (4 \times 5)$$

Additive Identity

$$n + 0 = n \quad 12 + 0 = 12$$

Additive Inverse

$$v + (-v) = 0 \quad 4 + (-4) = 0$$

Multiplicative Identity

$$p \cdot 1 = p \quad 18 \cdot 1 = 18$$

Multiplicative Inverse

$$x \cdot \frac{1}{x} = 1 \quad 5 \cdot \frac{1}{5} = 1$$

Distributive Property

$$r(s + t) = r(s) + r(t) \quad 7(9 + 6) = 7(9) + 7(6)$$