

RULE:

$$x^m \cdot x^n = x^{m+n}$$

Examples:

$$x^2 \cdot x^3 = x^5$$

$$g^3 \cdot g^5 = g^8$$

$$a^1 \cdot a^4 = a^5$$

RULE:

$$(x^m)^n = x^{mn}$$

Examples:

$$(x^2)^3 = x^6$$

$$(g^3)^5 = g^{15}$$

$$(a^4)^2 = a^8$$

RULE:

$$(x^m y^k)^n = x^{mn} y^{kn}$$

Examples:

$$(x^2 y)^3 = x^6 y^3$$

$$(g^3 h^2)^5 = g^{15} h^{10}$$

$$(ab)^2 = a^2 b^2$$

RULE:

$$\frac{x^m}{x^n} = x^{m-n}$$

Examples:

$$\frac{x^6}{x^3} = x^3$$

$$\frac{a^2}{a^3} = \frac{1}{a}$$

RULE:

$$x^{-m} = \frac{1}{x^m}$$

Examples:

$$x^{-4} = \frac{1}{x^4}$$

$$\frac{1}{g^{-2}} = g^2$$

RULE:

$$x^0 = 1$$

Examples:

$$(x^2 y)^0 = 1$$

$$(g^0)^5 = 1$$

**QUOTIENT
PROPERTY**

**NEGATIVE
EXPONENTS**

**ZERO
EXPONENTS**

**PRODUCT
PROPERTY**

**POWER OF A
POWER**

**POWER OF A
PRODUCT**