

Product of Powers

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

When multiplying like **bases**, add the **exponents**

$$x^3 \cdot x^4$$

Zero Exponent Property

Anything (except 0) raised to the **zero power** is equal to 1.

$$a^0 = 1$$

Negative Exponent Property

$$a^{-m} = \frac{1}{a^m} \qquad \frac{1}{a^{-m}} = a^m$$

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

When multiplying like bases, add the exponents

$$a^2 \cdot a^6$$

$$3^6 \cdot 3^{-2}$$

$$2^2 \cdot 2^3$$

$$5^4 \cdot 5^{-4}$$

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

When multiplying like bases, add the exponents

$$4x^3 \cdot 3x^4$$

$$-2a^3b^3 \cdot 5a^6b^5$$

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

When multiplying like bases, add the exponents

$$-y^{-5} \cdot 4y^5$$

$$(2x^3)(4y^5)(3x^5y)$$

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

When multiplying like bases, add the exponents

$$a^{-6} \cdot b^{-2} \cdot a^2 \cdot b^6$$

$$(-3x^4y^{-1})(4x^2y^5)(5x^{-6}y^{-4})$$

Product of Powers

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

The diagram illustrates the product of powers rule. It shows the equation $x^m \cdot x^n = x^{m+n}$. A green bracket is positioned below the bases x and x , indicating they are like bases. Two blue arrows point from the exponent m to the plus sign, and two red arrows point from the exponent n to the plus sign, indicating that the exponents are added together.

When multiplying like **bases**, add the **exponents**