Product of Powers (Multiplying Like Bases)

Name _____

Date _____ Period _____

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

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

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

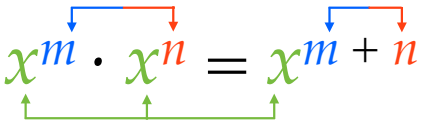
$$x^m \cdot x^n = x^{m+n}$$

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



When multiplying like bases, add the exponents