

Algebra 0507

Exponents

Product of Powers

Words:

Formula:

Example:

1.) $2^2 \cdot 2^3 =$ _____

4.) $(4m^3n^5)(3m^6n^2) =$ _____

2.) $x^4 \cdot x^5 =$ _____

5.) $(-5x^4y^2)(2x^2y^3) =$ _____

3.) $(xy^2)(x^3y) =$ _____

6.) $(7m^2n^4)(-mn^{-2}) =$ _____

Powers of Powers

Words:

Formula:

Example:

1.) $(2^3)^2 =$ _____

4.) $(3x^2y^4)^3 =$ _____

2.) $(x^5)^4 =$ _____

5.) $(-2xy^4)^2 =$ _____

3.) $(m^3)^4(n^2)^5 =$ _____

6.) $(-3m^3n^3)^2(-2m^5n^5)^3 =$ _____

Negative Exponents

Words:

Formula:

Example:

1.) $3^{-2} =$ _____

4.) $2x^{-2} =$ _____

2.) $2^{-3} =$ _____

5.) $(2x)^{-2} =$ _____

3.) $x^{-5} =$ _____

6.) $3xy(4xy)^{-2} =$ _____

Quotients

Words:

Formula:

Example:

1.) $\frac{2^3}{2} = \underline{\hspace{2cm}}$

4.) $\frac{-3x^5y}{12x^4y^2} =$ _____

2.) $\frac{3^{-2}}{3^3} =$ _____

5.) $\frac{4m^3n^0}{2n^{-1}} =$ _____

3.) $\frac{x}{x^4} =$ _____

6.) $\frac{-5x^{-3}y^5z^{-4}}{x^2y^{-2}z^3} =$ _____

Powers of Quotients

Words:

Formula:

Example:

1.) $\left(\frac{2}{3}\right)^3 =$ _____

4.) $\left(\frac{x^3y^{-2}}{3z^4}\right)^3 =$ _____

2.) $\left(\frac{2}{3}\right)^{-3} = \underline{\hspace{2cm}}$

5.) $\left(\frac{x^3y^{-2}}{3z^4}\right)^{-3} = \underline{\hspace{2cm}}$

3.) $\left(\frac{2xy}{z}\right)^4 = \underline{\hspace{2cm}}$

6.) $\frac{-5x^{-2}y^3}{z^{-2}}\left(\frac{-2xy}{z}\right)^3 = \underline{\hspace{2cm}}$

Create an Example

Anything to the 0 power equals _____

Anything to the 1st power equals _____

A negative power tells you to do what?

1. _____

2. _____

With a *product of powers* _____ the exponents.

With a *quotient of powers* _____ the exponents.

With a *power to a power* _____ the exponents.