EXPONENT RULES

Graphic Organizer

Name	Rule	Examples
ADDING & SUBTRACTING MONOMIALS	**COMBINE LIKE TERMS!!!** (DO NOT CHANGE common variables and exponents!)	1. $9x^2y - 10x^2y =$ 2. Subtract $6w$ from $8w$.
PRODUCT RULE	$x^a \cdot x^b =$	1. $h^2 \cdot h^6 =$ 2. $(-2a^2b) \cdot (7a^3b) =$
POWER RULE	$\left(x^a\right)^b =$	1. $(x^2)^3 =$ 2. $(-2m^5)^2 \cdot m^3 =$
QUOTIENT RULE	$\dfrac{x^a}{x^b} =$	1. $\dfrac{27x^5}{42x} =$ 2. $\dfrac{(y^2)^2}{y^4} =$
NEGATIVE EXPONENT RULE	$x^{-a} =$	1. $-5x^{-2} =$ 2. $\dfrac{4k^2}{8k^5} =$
ZERO EXPONENT RULE	$x^0 =$	1. $7x^0 =$ 2. $\dfrac{(w^4)^2}{w^8} =$

RULES FOR EXPONENTS

Rule		Example
If…	Then…	
you are **multiplying** the same base with exponents	keep the base and **add** the exponents.	
you are **dividing** the same base with exponents	keep the base and **subtract** the exponents.	
0 is the exponent	the expression equals **1**.	
you are raising an **exponent to a power**	keep the base and **multiply** the exponents.	
the exponent is **negative**	move the base and exponent to the **denominator**, and make the exponent **positive**.	