Properties of Exponents Cheat Sheet

Name_____

Multiplication Property:	EX w/ numbers:	EX w/ variables:	EX w/ num. and variables:
Add exponents if bases are the same	$3^3 \cdot 3^5 =$	$x^2 \cdot x^{10} =$	$2x^2 y \cdot 4x^3 y^5 =$
Power Property:	EX w/ numbers:	EX w/ variables:	EX w/ num. and variables:
Multiply exponents when they are inside and outside parenthesis	$(5^3)^4 =$	$(y^3)^{11} =$	$(6x^4 y^8 z)^4 =$
Division Property:	EX w/ numbers:	EX w/ variables:	EX w/ num. and variables:
Subtract top exponent minus bottom exponent	$\dfrac{3^{12}}{3^5} =$	$\dfrac{y^{17}}{y^6} =$	$\dfrac{3x^{10}}{9x^4} =$ *Simplify all fractions!*
Zero Property:	EX w/ numbers:	EX w/ variables:	EX w/ num. and variables:
Any number raised to the zero power is equal to 1	$100^0 =$	$(xy)^0 =$	$(3a^2b^4)^0 =$ $3(a^2b^4)^0 =$
Negative Exponent Property:	EX w/ numbers:	EX w/ variables:	EX w/ num. and variables:
If the exponent is negative move the term to the opposite side and make the exponent positive	$3^{-4} =$	$x^{-6} =$	$\dfrac{16x^{-10}}{2x^{-2}} =$ *Simplify all fractions!*