

Name \_\_\_\_\_ Per \_\_\_\_\_ Date \_\_\_\_\_

### EXPONENTS!

Product Property	$a^m \cdot a^n = a^{m+n}$
Quotient Property	$\frac{a^m}{a^n} = a^{m-n}$ , if $a \neq 0$
Power of a Power Property	$(a^m)^n = a^{mn}$
Power of a Product Property	$(ab)^m = a^m \cdot b^m$
Power of a Quotient Property	$\left(\frac{a}{b}\right)^m = \frac{a^m}{b^m}$ , if $b \neq 0$
Definition of a Negative Exponent	$a^{-m} = \frac{1}{a^m}$ and $\frac{1}{a^{-m}} = a^m$ , if $a \neq 0$
Definition of a Zero Exponent	$a^0 = 1$ , if $a \neq 0$
Definition of a Rational Exponent	If $b > 0$ , $n > 0$ , and $m$ and $n$ are integers, then $b^{m/n} = \sqrt[n]{b^m} = \left(\sqrt[n]{b}\right)^m$