

NAME: _____

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Positive Exponents

Lesson 1

When a factor is repeated several times in an expression, we can use exponents to shorten the amount of writing.

$$3 \times 3 \times 3 \times 3 \times 3 \times 3 = 3^6$$

In the above example, **3** is the **base**, **6** is the **exponent** and **3^6** is called the **power**.

Exponential Form	Word Form	Factored Form	Standard Form
3^0	Three to the power of zero		1
8^4	Eight to the power of four	$8 \times 8 \times 8 \times 8$	4096
4^2	Four squared $\hookrightarrow = 2$	4×4	16
7^3	Seven cubed $\hookrightarrow = 3$	$7 \times 7 \times 7$	343
$\left(\frac{3}{4}\right)^3$	Three-quarters to the third power	$\frac{3}{4} \times \frac{3}{4} \times \frac{3}{4}$	$\frac{27}{64}$
$\frac{3^3}{4}$	Three cubed divided by four	$\frac{3 \times 3 \times 3}{4}$	$\frac{27}{4}$
$(-5)^4$	Negative five to the fourth power	$(-5) \times (-5) \times (-5) \times (-5)$	+625
-5^4	Five to the power of four is subtracted from some number	$-5 \times 5 \times 5 \times 5$	-625

every thing inside () means is affected

no () means only the # directly beside the exponent is affected