

Exponents

3 ← Exponent
4 ← Base

This says four to the third power,

$$4 \cdot 4 \cdot 4 = 64$$

Exponent form	Word	factor	Product
7^2	seven squared	$7 \cdot 7$	49
5^3	five cubed	$5 \cdot 5 \cdot 5$	125
3^4	three to the fourth power	$3 \cdot 3 \cdot 3 \cdot 3$	81

Powers of 10

Power of 10	Expanded Form	Standard Form
10^0	1	1
10^1	10	10
10^2	$10 \cdot 10$	100
10^3	$10 \cdot 10 \cdot 10$	1,000
10^4	$10 \cdot 10 \cdot 10 \cdot 10$	10,000
10^5	$10 \cdot 10 \cdot 10 \cdot 10 \cdot 10$	100,000

anything to the 0 power is 1

Power of 10	Expanded Form	Standard Form	
		Decimal	Fraction
10^0	1	1	$\frac{1}{1}$
10^{-1}	.1	$\frac{1}{10}$	$\frac{1}{10}$
10^{-2}	$.1 \times .1$	$\frac{1}{100}$	$\frac{1}{100}$
10^{-3}	$.1 \times .1 \times .1$	0.001	$\frac{1}{1000}$
10^{-4}	$.1 \times .1 \times .1 \times .1$	0.0001	$\frac{1}{10000}$
10^{-5}	$.1 \times .1 \times .1 \times .1 \times .1$	0.00001	$\frac{1}{100000}$