1.8 Scientific Notation and Other Ways of Writing Numbers

This is an easy and practical short cut to writing very large or very small numbers. It uses powers of 10.

Power	Number	Name	Prefix	symbol
10^1	10	Ten	Deca	da
10^2	100	Hundred	Hector	h
10^3	1000	Thousand	Kilo	K
10^6	1 000 000	Million	Mega	M
10^9	1 000 000 000	Billion	Giga	G
10^{12}	1 000 000 000 000	Trillion	Tera	T
Positive exponents mean very large #, the exponent is the number of zeros you have. When you multiply by 10^n, the decimal point moves n places to the right				
Power	**Number**	**Name**	**Prefix**	**symbol**
10^{-1}	0.1	Tenth	Deci	d
10^{-2}	0.01	Hundredth	Centi	c
10^{-3}	0.001	Thousandth	Milli	m
10^{-6}	0.000 001	Millionth	Micro	μ
10^{-9}	0.000 000 001	Billionth	Nano	n
10^{-12}	0.000 000 000 001	Trillionth	Pico	P
Negative exponents mean very small #, the exponent is the number of decimal places you have. When you divide by 10^n, the decimal point moves n places to the left.				

A positive number in **scientific notation** is in the form:

$$a \times 10^n \quad \text{where } 1 \le a < 10; \text{ and n is an integer.}$$