

Exponential Notation

Repeated multiplication of the same number can be written in two different ways

$$3*3*3*3 \text{ or } 3^4 \longleftarrow \textit{exponent}$$

The exponent shows how many times 3 is multiplied by itself. 3^4 is in a format called exponential notation.

Examples of exponential notation

$$6 = 6^1$$

$$6*6 = 6^2$$

$$6*6*6 = 6^3$$

etc.

six to the first power (usually don't write the 1)

six squared or six to the second power

six cubed or six to the third power

$$3*3*3*3*5*5*5 = 3^4*5^3$$

Place values are actually powers of 10

Ten	10^1	
Hundred	10^2	
Thousand	10^3	
Ten-Thousand	10^4	
Hundred-Thousand	10^5	
Million		10^6