# Word 2007 Equation Editor Tips



The equations editor in Word 2007 is quite useful and fairly quick, when you know a few simple shortcuts. First, "Alt+=" will insert an equation.

All of these tips use the format "collection_of_symbols {space}", where "{space}" is the space bar.

**Simple commands**

1) Subscripts & superscripts: use "_" and "^" respectively
   a. "x_1" becomes $x_1$
   b. "x^2" becomes $x^2$
   c. "x_f^2" becomes $x_f^2$
2) Fractions: "a/b" becomes $\frac{a}{b}$
3) Parenthesis/brackets/absolute value: you can then enter anything (including fractions) into the empty box between the parens/brackets/braces/absolute value bars
   a. "()" becomes ( )
   b. "[]" becomes [ ]
   c. "{}" becomes { }
   d. "||" becomes | |
4) Parenthesis can also be used to group things:
   a. "5/(4+5+6)" becomes $\frac{5}{4+5+6}$
   b. "x^(5-6i)" becomes $x^{5-6i}$
5) Some things require double spaces:
   a. "x_t_f {space} {space}" becomes $x_{t_f}$
6) Functions: these automatically change from italicized to normal type
   a. "sin" becomes $\sin$
   b. "cos" becomes $\cos$
   c. "tan" becomes $\tan$

**Latex commands**

*LaTeX* is a special language (used mainly by mathematicians, but also engineers) to write technical papers, dissertations, etc. It makes writing math equations especially easy.

7) Greek letters: all Greek letters are accessible using "\letter_name". Capitalizing the first letter of the name will give the capital version of the greek letter.
   a. "\mu" becomes $\mu$
   b. "\Gamma" becomes $\Gamma$
   c. "\Omega" becomes $\Omega$
   d. "\alpha" becomes $\alpha$
8) Square root: "\sqrt" becomes $\sqrt{}$, which can then be followed by another expression. So, the expression "\sqrt {space} 34 {space}" becomes $\sqrt{34}$. (This can also be done using "\sqrt(34) {space}".)

9) Integral: "\int" becomes $\int$ , which can be sub- and super-scripted by the limits of integration. So, the expression "\int_0^1 {space} x dx" becomes $\int_0^1 x\,dx$.
10) Infinity: "\infty" becomes ∞
11) Sum: "\sum_(n=1)^6 {space} n^2 {space}" becomes $\sum_{n=1}^{6} n^2$
12) Operators:
    a. "x \dot {space} y" becomes $x \cdot y$
    b. "1.5 \times {space} 10^5 {space}" becomes $1.5 \times 10^5$
13) Accents: These require double spaces. **Note:** there is no space between the "x" and the "\accent_name".
    a. "x\dot {space} {space}" becomes $\dot{x}$
    b. "x\ddot {space} {space}" becomes $\ddot{x}$
    c. "x\bar {space} {space}" becomes $\bar{x}$
    d. By itself, "\bar {space} {space}" becomes $\bar{}$