

Simple equations, like x^y or $x_n = \sqrt{a + b}$ can be typeset right in the text line by enclosing them in a pair of single dollar sign symbols. Don't forget that if you want a real dollar sign in your text, like \$2000, you have to use the `\$` command.

A more complicated equation should be typeset in *displayed math* mode, like this :

$$z \left(1 + \sqrt{\omega_{i+1} + \zeta - \frac{x + 1}{\Theta + 1} y + 1} \right) = 1$$

The “equation” environment displays your equations, and automatically numbers them consecutively within your document, like this :

$$\left[\mathbf{X} + \mathbf{a} \geq \hat{\mathbf{a}} \sum_i^N \lim_{x \rightarrow k} \delta C \right] \quad (1)$$