

Moving onto formulas in more detail, the operators are typed in the normal way: $a + b/c - d$. The spaces between operands in a math environment are ignored, and only used here to aid readability.

The multiplication operator can take the form of \cdot or \times , as shown: $a \cdot b$ does not equal $a \times b$.

As demonstrated previously, fractions are handled with $\frac{\text{num}}{\text{den}}$, for example:

$$\frac{\text{numerator}}{\text{denominator}}$$

Subscripts are handled with underscores e.g. C_2H_5OH . Superscripts are handled with carets e.g. Mg^{2+} . While not mandatory as single character subscripts and superscripts, both need be typed with curly braces $\{$ and $\}$ as arguments for more complicated expressions.

Binomial coefficients can be typeset with $\binom{}{}$ as either inline or displayed formulas. For example, $\binom{c}{d+r}$.

Congruences can be typeset with \equiv as:

$$a \equiv v \pmod{\theta}$$

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Delimiters e.g. $[] ()$ appear as normal for inline formulas and can be proportioned based on what they delimit with \left and \right :

$$\left(\frac{1+x}{2-y^2} \right)^3$$

in other words, the expression $\left ($ instructs LaTeX to expand the left-hand bracket that follows it (the lone $($ entered). This scaling is matched with the command $\right)$.

Ellipses can typeset with \dots , printed on the line as $a \dots b$ or centered $F(x_1 \dots x_n)$ with \cdots .

Integrals are typeset with \int , with the aforementioned subscript and superscript commands denoting the lower and upper limits respectively.

$$\int_0^\pi \sin x \, dx = 2$$

The command $\,$ is used to introduce a space (between x and dx) in the math environment.

Accents can take the form of a bar, hat, tilde or vector:

$$\bar{a} \text{ from } \bar{\{a\}}$$

$$\hat{a} \text{ from } \hat{\{a\}}$$

$$\tilde{a} \text{ from } \tilde{\{a\}}$$

$$\vec{a} \text{ from } \vec{\{a\}}$$

Matrices can appear inline or displayed, and are typeset with `\matrix` as begin and end blocks, with the ampersand `&` as the element delimiter and two backslashes as the row delimiter, as shown below:

$$\mathbf{B} = \begin{matrix} a + b + d & hmn \\ qr & f \times d \end{matrix}$$

One can also introduce stretched parentheses (with `\pmatrix`), with bars (with `\vmatrix`) and with square brackets (with `\bmatrix`) just as `\left` and `\right` do:

$$\mathbf{B} = \left(\begin{matrix} a + b + d & hmn \\ qr & f \times d \end{matrix} \right) \begin{vmatrix} 3 \\ 4 \end{vmatrix} \begin{bmatrix} \alpha \\ \beta \end{bmatrix}$$

Other operators such as sine $\sin x$ were introduced above. One can also typeset products and sums with the subscript and superscript commands as follows:

$$\sum_{i=1}^n x_i^2 \text{ and } \prod_{i=1}^n x_i^2$$

n -th roots are typeset with `\sqrt[n]{operand}`, for example $\sqrt[3]{5}$. The n -th parameter is only used if a square root is not required.