Superscripts and subscripts

$$2x^3$$

$$2x^{34}$$

$$2x^{3x+4}$$

$$2x^{3x^4+5}$$

$$x_1$$

$$x_{12}$$

$$x_{1_2}$$

$$a_0, a_1, \ldots, a_n$$

Greek letters

$\alpha\ \beta\ \gamma\ \delta\ \epsilon\ \zeta\ \eta\ \theta\ \iota\ \kappa\ \lambda\ \mu\ \nu\ \xi\ \pi\ \rho\ \sigma\ \tau\ \upsilon\ \phi\ \chi\ \psi\ \omega$

Uppercase Greek letters

$\Gamma\ \Delta\ \Theta\ \Lambda\ \Xi\ \Pi\ \Sigma\ \Upsilon\ \Phi\ \Psi\ \Omega$

Trigonometry functions

$$y = \sin x$$

$$y = \cos x$$

$$y = \tan x$$

$$y = \sin^{-1} x$$

$$y = \arccos x$$

Logarithms

$$y = \ln x$$

$$y = \log x$$

$$y = \log_n x$$

Roots

$$\sqrt{x}$$

$$\sqrt[n]{x}$$

$$\sqrt{x^2 + y^2}$$

Fractions

$\frac{a}{b}\ \frac{a}{b}$

$$\frac{2}{3}$$