superscripts:

$$2x^3$$

$$2x^{34}$$

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

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

subscripts:

$$x_1$$

$$x_{12}$$

$$x_{123}$$

greek letters:

$$\pi$$

$$\Pi$$

$$\alpha$$

$$A = \pi r^2$$

trig functions:

$$y = \sin x$$

$$y = \cos x$$

$$y = \cot x$$

$$y = \tan x$$

$$y = \csc \theta$$

$$y = \sinh \theta$$

$$y = \arcsin \theta$$

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

log functions:

$$\log x$$

$$\log_5 x$$

$$\ln x$$

square roots:

$$\sqrt{2}$$

$$\sqrt[3]{2}$$

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

$$\sqrt{1 + \sqrt{x}}$$

fractions:

About $\frac{2}{3}$ of the glass is full.

About $\dfrac{2}{3}$ of the glass is full.

$$\frac{x}{x^2 + x + 1}$$

$$\frac{\sqrt{x+1}}{\sqrt{x-1}}$$

$$\frac{1}{1 + \frac{1}{x}}$$

$$\sqrt{\frac{x}{x^2 + x + 1}}$$