superscripts

$$2x^{34}$$

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

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

subscripts

$$2x_3$$

$$x_{1_2}$$

$$x_{1_{2_3}}$$

$$a_0, a_1, a_2, \ldots, a_{100}$$

Greek letters

$$\pi$$

$$\alpha$$

$$A=\pi r^2$$

$$\omega$$

Trig Functions

$$y = \sin x$$

$$y = \tan x$$

$$y = \cos \theta$$

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

Log functions

$$y = \log x$$

$$y = \log_5 x$$

$$y = \ln x$$

Roots

$$\sqrt{2}$$

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

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

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

$$\frac{x}{y}$$

Fractions

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

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

About $\frac{3}{4}$ of the glass is full.

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

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