superscripts:

$$2x^3$$

$$2x^{34}$$

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

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

subscripts:

$$x_1$$

$$x_{12}$$

$$x_{1_{2}}_{3}$$

Greek letters:

$$\pi$$

$$\alpha$$

$$A=\pi r^2$$

Trig functions:

$$y = \sin x$$

Log functions:

$$\log_5 x$$

$$\ln x$$

Square roots:

$$\sqrt{2}$$

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

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

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

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