superscripts:
$$2x^3$$

$$2x^{3}$$

$$2x^{34}$$

$$2x^{34x+4}$$

$$2x^{34x^{4}+4} + 5$$

subscripts:
$$2x_3$$

$$2x_3$$
$$2x_{134x_4}$$

greek letters:

 $\begin{array}{l} \pi \\ \alpha \\ A = \pi r^2 \end{array}$

$$\sin(\pi r^2)$$

log functions:

$$\log_5(\pi r^2)$$

square roots:

$$\sqrt{2r^2}$$

$$\sqrt[3]{2r^2 + 4}$$

$$\sqrt[3]{\sqrt[4]{r^2 + 4}}$$

fractions:

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

$$\frac{A}{A} = \pi r^{2}$$

$$\frac{2x^{34x^{4}} + 4}{34x^{4} + 4}$$

$$\frac{2}{\frac{34x^{4}}{3}}$$