The function $f(x) = (x-3)^2 + \frac{1}{2}$ has domain $D_f : (-\infty, \infty)$
The function $f(x) = (x-3)^2 + \frac{1}{2}$ has domain $\mathrm{D}_f : (-\infty, \infty)$ and range $\mathrm{D}_f : \left[\frac{1}{2}, \infty\right)$
$\lim_{x \to a}$

$\lim x \to a^- f(x)$

$\lim_{x \to a^-} f(x)$

$\lim x \to a^- \frac{f(x)-f(a)}{x-a} = f(a)$

$$\lim x \to a^- \frac{f(x) - f(a)}{x - a} = f(a)$$

$\int \sin x \, dx$
$\int \sin x \, dx = -\cos x + C$
$$\int \sin x \, dx = -\cos x + C$$
$\int_a^b$
$\int\limits_a^b$
$$\int_a^b$$
$\int\limits_a^b$
$\int\limits_{2a}^b$
$\int\limits_{2a}^b x^2 \, dx = \left[\frac{x^3}{3}\right]_a^b - \frac{3}{4}$
$\sum_{n=1}^{\infty} ar^n = a + ar + ar^2 + ... + ar^n$
$\sum\limits_{n=1}^{\infty} ar^n = a + ar + ar^2 + \cdots + ar^n$
$\int_a^b f(x) \, dx = \lim_{x \to \infty} \sum k = 1^n f(x_k) \cdot \Delta x$
vector symbols

$\vec{v} = v_1\vec{(x)} + v_2\vec{y} = \langle v_1, v_2 \rangle$