

The function  $f(x) = (x - 3)^2 + \frac{1}{2}$  has domain  $D_f : (-\infty, +\infty)$  and range  $R_f : [\frac{1}{2}, \infty)$ .

$$\lim_{x \rightarrow a^+} f(x)$$

$$\lim_{x \rightarrow a} \frac{f(x)-f(a)}{x-a} = f'(a)$$

$$\int \sin x \, dx = -\cos x + C$$

$$\int_a^b$$

$$\int_a^b$$

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$$\int_{2a}^b x^2 \, dx = \left[ \frac{x^3}{3} \right]_{2a}^b$$

$$\sum_{n=1}^{\infty} ar^n = a + ar + ar^2 + \cdots + ar^n$$

$$\int_a^b f(x) \, dx = \lim_{x \rightarrow \infty} \sum_{k=1}^n f(x_k) \cdot \Delta x$$

$$\vec{v} = v_1\vec{i} + v_2\vec{j} = \langle v_1, v_2 \rangle$$