

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

$$\frac{f(x+h)-f(x)}{h}$$

$$\frac{f(z)-f(x)}{z-x}$$

$$\int_a^x f(t) \, dt$$

$$\int_a^b f(x) \, dx = \lim_{\max \Delta x_i \rightarrow 0} \sum_{i=1}^n f(x_i^*) \Delta x_i$$

$$\sum_{i=1}^n f(x_i) \Delta x$$

$$f'(c) = \frac{f(b)-f(a)}{b-a}$$

$$\frac{f(b)-f(a)}{g(b)-g(a)} = \frac{f'(c)}{g'(c)}$$

$$\frac{d}{dx} f(g(x)) = f'(g(x))g'(x)$$

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

$$\int_a^b f(g(x))g'(x) \, dx = \int_{g(a)}^{g(b)} f(u) \, du$$

$$\frac{d}{dx} \int_a^x f(t) \, dt = f(x)$$

$$\frac{6x^2-1}{7} + \frac{\sqrt{x \tan(x)}}{\sin(x^2) + \cos(x^3+1)}$$

$$\int_C f(x,y) \, ds$$

$$\int_a^b \int_{g(x)}^{h(x)} f(x,y) \, dy \, dx$$

$$f'(a)=\lim_{b\rightarrow a}\frac{f(b)-f(a)}{b-a}=\lim_{h\rightarrow 0}\frac{f(a+h)-f(a)}{h}$$

$$\text{For all } \epsilon > 0, \text{ there exists an } N(\epsilon) \text{ such that } |a_n - L| < \epsilon \text{ if } n > N(\epsilon)$$

$$\int_0^1 f(x) \, dx = \lim_{q \rightarrow 1^-} (1-q) \sum_{n=0}^\infty f(q^n) q^n$$