

$$\frac{d}{dx} \left(\frac{f(x)}{g(x)} \right) = \frac{f'(x)g(x) - f(x)g'(x)}{[g(x)]^2} \tag{1}$$

$$e = \lim_{n \rightarrow \infty} \left(1 + \frac{1}{n} \right)^n = \sum_{n=0}^{\infty} \frac{1}{n!} \tag{2}$$