

$$\lim_{x \rightarrow 0} \frac{\sin(x)}{x} = 1 \quad (1)$$

$$\lim_{x \rightarrow 0} \frac{\tan(x)}{x} = 1 \quad (2)$$

$$\lim_{x \rightarrow 0} \frac{1 - \cos^2(x)}{x^2} = 1 \quad (3)$$

$$\lim_{x \rightarrow 0} \frac{1 - \cos(x)}{x} = 0 \quad (4)$$

$$\lim_{x \rightarrow \infty} \frac{\sin(x)}{x} = 0 \quad (5)$$

$$\sin'(x) = \cos(x) \quad (6)$$

$$\cos'(x) = -\sin(x) \quad (7)$$

$$\tan'(x) = \frac{1}{\cos^2(x)} = \sec^2(x) \quad (8)$$

$$\cot'(x) = -\frac{1}{\sin^2(x)} = -\csc^2(x) \quad (9)$$

$$\sec'(x) = \sec(x) \tan(x) \quad (10)$$

$$\csc'(x) = -\csc(x) \cot(x) \quad (11)$$

$$(12)$$