Known Limits

$\lim_{t\to a} c = c.$	$\lim_{t\to\infty} c = c.$
$\lim_{t\to a} t = a.$	$\lim_{t\to\infty} t = \infty.$
	$\lim_{t\to-\infty} t = -\infty.$
$\lim_{t\to0^-} \frac{1}{t} = -\infty.$	$\lim_{t\to\infty} \frac{1}{t} = 0.$
$\lim_{t\to0^+} \frac{1}{t} = \infty.$	$\lim_{t\to-\infty} \frac{1}{t} = 0.$

$\lim_{t\to a} \sin t = \sin a.$	$\lim_{t\to\infty} \sin t$ does not exist.
$\lim_{t\to a} \cos t = \cos a.$	$\lim_{t\to\infty} \cos t$ does not exist.
$\lim_{t\to a} \ln t = \ln a.$	$\lim_{t\to\infty} \ln t = \infty.$
$\lim_{t\to0^+} \ln t = -\infty.$	
$\lim_{t\to a} e^t = e^a.$	$\lim_{t\to\infty} e^t = \infty.$
	$\lim_{t\to-\infty} e^t = 0.$

$\lim_{x\to0} \frac{\sin x}{x} = 1.$	$\lim_{x\to0} \frac{1-\cos x}{x} = 0.$

Limit Properties

$$\lim_{t\to a}[f(x)+g(x)] = \left[\lim_{t\to a} f(x)\right] + \left[\lim_{t\to a} g(x)\right].$$

$$\lim_{t\to a}[f(x)-g(x)] = \left[\lim_{t\to a} f(x)\right] - \left[\lim_{t\to a} g(x)\right].$$

$$\lim_{t\to a}[f(x)g(x)] = \left[\lim_{t\to a} f(x)\right] \cdot \left[\lim_{t\to a} g(x)\right].$$

$$\lim_{t\to a} \frac{f(x)}{g(x)} = \frac{\lim_{t\to a} f(x)}{\lim_{t\to a} g(x)}, \text{ if } \lim_{t\to a} g(x) \neq 0.$$

$$\lim_{t\to a} f(\ g(x)\ ) = f\left(\lim_{t\to a} g(x)\right), \text{ if } f(x) \text{ is continuous.}$$