

## 1 Properties of Limit

## 2 Find Limit

1.  $\lim_{x \rightarrow 3} 1x + 27$
2.  $\lim_{x \rightarrow 0} 1x + 27$
3.  $\lim_{x \rightarrow 3} 27$
4.  $\lim_{x \rightarrow 3} \frac{x^2 - 2x - 3}{x - 3}$
5.  $\lim_{x \rightarrow 3} \frac{1}{x}$
6.  $\lim_{x \rightarrow 0} \frac{1}{x}$
7.  $\lim_{x \rightarrow \infty} \frac{1}{x}$
8.  $\lim_{x \rightarrow 3} \begin{cases} x^2 - 9, & \text{if } x \text{ is not } 3 \\ 6, & \text{if } x \text{ is } 3 \end{cases}$
9.  $\lim_{x \rightarrow 3} \begin{cases} x^2 - 9, & \text{if } x \text{ is not } 3 \\ 0, & \text{if } x \text{ is } 3 \end{cases}$
10.  $\lim_{x \rightarrow 3} \begin{cases} x, & \text{if } x \text{ is less than } 3 \\ 10, & \text{if } x \text{ is greater than } 3 \\ 0, & \text{if } x \text{ equals to } 3 \end{cases}$
11.  $\lim_{x \rightarrow \infty} \sin(x)$

## 3 Indeterminate Forms

1.  $\frac{0}{0}$
2.  $\frac{\infty}{\infty}$
3.  $0 * \infty$
4.  $0^0$
5.  $\infty^0$
6.  $1^\infty$
7.  $\infty - \infty$