

Some Limits:

1. $\lim_{n \rightarrow \infty} \frac{\ln n}{n} = 0$
2. $\lim_{n \rightarrow \infty} \sqrt[n]{n} = 1$
3. $\lim_{n \rightarrow \infty} \sqrt[n]{x} = 1$, for $x > 0$.
4. $\lim_{n \rightarrow \infty} x^n = 0$, for $|x| < 1$.
5. $\lim_{n \rightarrow \infty} \left(1 + \frac{x}{n}\right)^n = e^x$, for any x .
6. $\lim_{n \rightarrow \infty} \frac{x^n}{n!} = 0$, for any x .
7. $\lim_{x \rightarrow 0} \frac{\sin x}{x} = 1$