1. **D'Alambert's Ratio Test:**

   Assume that $\lim\limits_{n\to\infty} \dfrac{a_{n+1}}{a_n} = k$

   - If $k > 1$, then $\sum\limits_{n=1}^{\infty} a_n = \infty$.
   - If $k < 1$, then $\sum\limits_{n=1}^{\infty} a_n < \infty$.

2. **Cauchy's Root Test:**

   Assume that $\lim\limits_{n\to\infty} \sqrt[n]{a_n} = k$

   - If $k > 1$, then $\sum\limits_{n=1}^{\infty} a_n = \infty$.
   - If $k < 1$, then $\sum\limits_{n=1}^{\infty} a_n < \infty$.

3. **Raabe's Test:**

   Let $\sum\limits_{n=1}^{\infty} a_n$ be a positive series.

   Assume that $K_n := n\left(\frac{a_n}{a_{n+1}} - 1\right)$, and $\lim\limits_{n\to\infty} K_n = K$.

   Then

   - If $K > 1$, then $\sum\limits_{n=1}^{\infty} a_n < \infty$.
   - If $K < 1$, then $\sum\limits_{n=1}^{\infty} a_n = \infty$.

4. **Kummer's Test:**

   Given a series $\sum\limits_{n=1}^{\infty} a_n$.

   Let $c_n$ be positive such that $\sum\limits_{n=1}^{\infty} \dfrac{1}{c_n} = \infty$.

   Define $K_n := c_n\left(\frac{a_n}{a_{n+1}}\right) - c_{n+1}$.

   Assume that $\lim\limits_{n\to\infty} K_n = K$.

   Then

   - If $K > 0$, then $\sum\limits_{n=1}^{\infty} a_n < \infty$.
   - If $K < 0$, then $\sum\limits_{n=1}^{\infty} a_n = \infty$.