$$\sum_{k=2}^{\infty} \frac{1}{k^2 - 1}$$

$$\sum_{k=0}^{\infty} \frac{1}{1 + k^2}$$

$$\sum_{k=2}^{\infty} \frac{\ln\left(k^2\right)}{\ln\left(k^8\right)}$$

$$\sum_{k=0}^{\infty} \frac{k}{1 + k^2}$$

$$\sum_{k=1}^{\infty} k^{-1.1}$$

$$\sum_{k=1}^{\infty} \frac{1}{k^{0.9}}$$

$$\sum_{k=0}^{\infty} \ln\left(\frac{k+2}{k+1}\right)$$

$$\sum_{k=0}^{\infty} \frac{2^k}{k!}$$

Converge or diverge? Justify

$$\sum_{k=0}^{\infty} \tan^k\left(\frac{\pi}{7}\right)$$

$$\sum_{k=0}^{\infty} \frac{k!}{50000^k}$$

$$\sum_{k=0}^{\infty} \frac{1}{k!}$$

Converge or Diverge?

$$\sum_{k=1}^{\infty} \frac{5}{(3k+1)(3k-2)}$$

Converge or Diverge?

$$\sum_{k=0}^{\infty} \frac{\sqrt{k}}{k^2+1}$$

$$\sum_{k=2}^{\infty} \frac{1}{\left[\ln(k)\right]^k}$$

Converge or diverge?

$$\sum_{k=2}^{\infty} \frac{1}{k\ln(k)}$$

$$\sum_{k=2}^{\infty} \frac{1}{k\left(\ln(k)\right)^2}$$

Find the interval of convergence

$$\sum_{n=0}^{\infty}\left(\frac{(x-3)^n}{2^n(n+1)}\right)$$

Find the interval of convergence

$$\sum_{n=0}^{\infty}\left(\frac{(3x-9)^n}{2^n}\right)$$

Find the interval of convergence

$$\sum_{n=0}^{\infty}\left(\frac{(x-2)^n}{e^n}\right)$$