

The Root Test

Taken From: Calculus of a Single Variable (8th Edition):
by Larsen, Hostetler and Edwards

$$1. \sum_{n=1}^{\infty} \left(\frac{n}{2n+1} \right)^n$$

$$11. \sum_{n=1}^{\infty} \left(\frac{1}{n} - \frac{1}{n^2} \right)^n$$

$$2. \sum_{n=1}^{\infty} \left(\frac{2n}{n+1} \right)^n$$

$$12. \sum_{n=1}^{\infty} \left(\frac{\ln(n)}{n} \right)^n$$

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

$$13. \sum_{n=2}^{\infty} \frac{n}{(\ln n)^n}$$

$$4. \sum_{n=1}^{\infty} \left(\frac{4n+3}{2n-1} \right)^n$$

$$14. \sum_{n=1}^{\infty} \frac{(n!)^n}{(n^n)^2}$$

$$5. \sum_{n=2}^{\infty} \frac{(-1)^n}{(\ln n)^n}$$

$$6. \sum_{n=1}^{\infty} \left(\frac{-3n}{2n+1} \right)^{3n}$$

$$7. \sum_{n=1}^{\infty} (2^{\sqrt{n}} + 1)^n$$

$$8. \sum_{n=0}^{\infty} (e^{-n})$$

$$9. \sum_{n=1}^{\infty} \left(\frac{n}{4^n} \right)$$

$$10. \sum_{n=1}^{\infty} \left(\frac{n}{500} \right)^n$$