

Infinite Series: Convergent or Divergent?

1
$$\sum_{n=1}^{\infty} \frac{n}{n+1}$$

2
$$\sum_{n=1}^{\infty} (-1)^n$$

3
$$\sum_{n=1}^{\infty} \cos(1/n)$$

4
$$\sum_{n=1}^{\infty} 1/n!$$

5
$$\sum_{n=1}^{\infty} \frac{1}{n^2 + 1}$$

6
$$\sum_{n=2}^{\infty} \frac{2}{\ln |n|}$$

7
$$\sum_{n=1}^{\infty} \frac{1}{n(n+1)}$$

8
$$\sum_{n=1}^{\infty} \frac{1}{\sqrt{n}}$$

9
$$\sum_{n=1}^{\infty} \left(\frac{n+2}{2n}\right)^n$$