

## Series

## Convergence Tests

## Integral Test

1. *convergence*  $\sum_{n=0}^{\infty} \frac{1}{1 + \sqrt{n}}$

2. *convergence*  $\sum_{n=2}^{\infty} \frac{1}{\sqrt{n-1}}$

3. *convergence*  $\sum_{n=1}^{\infty} \frac{1}{n^2 - 9}$

4. *convergence*  $\sum_{n=6}^{\infty} \frac{1}{(n-3)(n-5)}$

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

6. *convergence*  $\sum_{n=1}^{\infty} \frac{\sqrt{n}}{n+4}$

7. *convergence*  $\sum_{n=1}^{\infty} \frac{\ln(n)}{n^3}$

8. *convergence*  $\sum_{n=2}^{\infty} \frac{1}{n\sqrt[3]{n} - n}$

9. *convergence*  $\sum_{n=2}^{\infty} \frac{1}{n \ln(n)}$

10. *convergence*  $\sum_{n=2}^{\infty} \frac{1}{n\sqrt{\ln(n)}}$

## Answers

### Series

#### Convergence Tests

##### Integral Test

1. diverges
2. diverges
3. converges
4. converges
5. converges
6. diverges
7. converges
8. converges
9. diverges
10. diverges