

Series

Convergence Tests

Comparison Test

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

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

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

4. *convergence* $\sum_{n=1}^{\infty} \frac{1}{(3+2n)^2}$

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

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

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

8. *convergence* $\sum_{n=1}^{\infty} \frac{1}{n^2+1}$

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

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

Answers

Series

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Comparison Test

1. diverges

2. converges

3. converges

4. converges

5. converges

6. $\frac{11}{18}$

7. converges

8. converges

9. converges

10. converges