

Series Testing Strategy for $\sum_{n=1}^{\infty} a_n$

Is it a geometric, alternating, or p-series?

Yes →

Use the corresponding test.

↓ No

Does the series diverge by the test for divergence?

Yes →

Cool, you're done.

↓ No

Try to answer yes to one of the following questions:

Is a_n easy to integrate?

Yes →

Try the Integral test

Is a_n easy to compare to a series you know?

Yes →

Try the Comparison test

Yes, but the inequality goes the wrong way →

Try the Limit Comparison test

Does a_n look like something to the n^{th} power?

Yes →

Try the root test

Does a_n have a certain quality that makes you want to try the ratio test?

Yes →

Do it.

If the test you try doesn't work, try another one!