# Strategy guide: *Tests for Series Convergence*

| Technique | Basic idea | When to try it | Reason for using it |
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| *Overall strategy* | *Try different tests until you get a conclusive answer.* | *To determine whether or not an infinite series converges at all.* | *You want to know if a series actually has a meaningful value.* |
| Divergence Test (or Limit Test) | It can never converge if the sums don't get smaller. | First thing to check! | Makes some *divergent* series easy to spot. Relatively quick. |
| Comparison Test (and Asymptotic Comparison Test) |  |  |  |
| Alternating Series Test |  |  |  |
| Integral Test |  |  |  |
| Ratio Test |  |  |  |
| Root Test |  |  |  |
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