

# Convergence and Divergence of Series

Name \_\_\_\_\_

S    A    N    If the  $n$ th term of a series goes to a non-zero constant as  $n$  goes to infinity then the series diverges.

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S    A    N    If the  $n$ th term of a series goes to zero as  $n$  goes to infinity then the series converges.

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S    A    N    The ratio test can be used to determine when a series converges or diverges.

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S    A    N    If the radius of convergence of a power series is zero then the power series diverges for all real numbers.

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S    A    N    If a power series has a center of convergence at  $x = 5$  and it is known that the series converges for  $x = 7$ , then the series also converges for  $x = 3$ .

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