

**Abel's Theorem.** *Let  $f(x) = \sum_{n=0}^{\infty} a_n x^n$  be a power series with finite positive radius of convergence  $R$ . If the series converges at  $x = R$ , then the series converges uniformly on  $[0, R]$  and  $f$  is continuous of  $x = R$ . If the series converges at  $x = -R$ , then the series converges uniformly on  $[-R, 0]$  and  $f$  is continuous of  $x = -R$ .*