

## Ratio Test

★ Given a series  $\sum_{k=1}^{\infty} u_k$ , if:

•  $\lim_{k \rightarrow \infty} \left| \frac{u_{k+1}}{u_k} \right| < 1$  then the series is absolutely convergent

•  $\lim_{k \rightarrow \infty} \left| \frac{u_{k+1}}{u_k} \right| > 1$  then the series is divergent

•  $\lim_{k \rightarrow \infty} \left| \frac{u_{k+1}}{u_k} \right| = 1$  then the Ratio Test is inconclusive.