

# 9.5 Alternating Series

Name:

Date: July 28, 2015

**P 6.** Determine the convergence or divergence of

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}n}{3n+2}$$

**P 8.** Determine the convergence or divergence of

$$\sum_{n=1}^{\infty} \frac{(-1)^n}{e^n}$$

**P 16.** Determine the convergence or divergence of

$$\sum_{n=1}^{\infty} \frac{1}{n} \cos n\pi$$

**P 20.** Determine the convergence or divergence of

$$\sum_{n=1}^{\infty} \frac{(-1)^n}{(2n+1)!}$$

**P 38.** Determine whether the series converges absolutely or conditionally, or diverges.

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{n^2}$$

**P 44.** Determine the convergence or divergence of

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}(2n+3)}{n+10}$$

**P 52.** Determine the convergence or divergence of

$$\sum_{n=1}^{\infty} (-1)^{n+1} \arctan n$$

**P 80.** Test for convergence or divergence and identify the test used.

$$\sum_{n=2}^{\infty} \frac{\ln n}{n}$$