

Name:

Section: 5 6 9 10

1. Determine if each of the following series converges or diverges. You may use the techniques of geometric series, telescoping series,  $p$ -series, divergence test, integral test, comparison test, limit comparison test, alternating series test, or absolute convergence test.

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

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