

Name:

Section: 11 12 13

1. Determine if the following series converge or diverge. You may use any technique.

$$(a) \sum_{n=1}^{\infty} \frac{7 \cos(n)}{n^2 + 1}$$

$$(b) \sum_{n=1}^{\infty} (-1)^n 2^{1/n}$$

$$(c) \sum_{n=3}^{\infty} \frac{(-5)^{n+1}}{2^{3n}}$$

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

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

$$(f) \sum_{n=1}^{\infty} \frac{\ln n}{n^2}$$