

Name: _____ Sort #: _____

Worksheet 16

Comparison & Alternating Series Tests

MATH 2205, Fall 2018

Determine if the given series converges.

1.
$$\sum_{k=1}^{\infty} \frac{\sqrt{k}}{k^2 + 7}$$

2. $\sum_{k=1}^{\infty} (-1)^{k+1} \sin\left(\frac{1}{k+1}\right)$

3. $\sum_{k=2}^{\infty} (-1)^k \frac{k}{\ln(k)}$

4. $\sum_{k=1}^{\infty} \frac{2k^3 + k}{k^4 + k^2 + 2}$