

Name: _____ Sort #: _____

Worksheet 15

Series; Integral & Divergence Tests

MATH 2205, Fall 2018

1. Determine if the following geometric series converge or diverge. If the series converges, compute its sum.

(a) $\sum_{k=0}^{\infty} 7(0.3)^{k+2}$

(b) $\sum_{k=-1}^{\infty} \frac{4}{2^k}$

2. Determine if $\sum_{n=1}^{\infty} \frac{1}{n^2 - 1}$ converges or diverges.

3. Determine if $\sum_{m=1}^{\infty} \cos\left(\frac{1}{m}\right)$ converges or diverges.

4. Determine if $\sum_{j=1}^{\infty} \frac{j}{e^j}$ converges or diverges.