

Math 231 Section A1
Quiz 5
July 2, 2007

Name: _____

Determine if the following series converge or diverge. Cite any rules you apply.

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

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

$$3) \quad \sum_{n=1}^{\infty} n e^{-n^2}$$

$$4) \quad \sum_{n=1}^{\infty} \frac{n^2 - n \log(n)^{10}}{n^3 + 4\sqrt{n}}$$

$$\text{Extra Credit:} \quad \sum_{n=3}^{\infty} \frac{3 - \sin^3(n) - 2^{n/2}}{n \log(n) \log \log(n)^4}$$