

Name: _____

Math 232 Quiz 8

1. (5 pts each) Determine whether the series is absolutely convergent, conditionally convergent, or divergent.

$$(a) \sum_{n=1}^{\infty} \frac{\sin(10n^2)}{n\sqrt{n}}$$

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

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

$$(d) \sum_{n=0}^{\infty} \frac{(-10)^n}{n!}$$

Bonus. (4 pts) Use the Integral Test to determine if the series is convergent or divergent.

$$\sum_{n=4}^{\infty} \frac{1}{n(\ln n)(\ln \ln n)}$$