

Name: _____

Math 1220-003 Quiz 10

July 19, 2018

You have until **the end of class** to complete this quiz. Make sure to write your name at the top of the quiz. This quiz is two questions, worth 20 points.

1. Use the limit comparison test to determine whether the following series converges or diverges:

$$\sum_{n=1}^{\infty} \frac{\ln n}{n^3}$$

2. Determine whether each of the following series diverges, converges conditionally, or converges absolutely:

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

$$(b) \sum_{n=1}^{\infty} \frac{\sin(n\pi/2)}{n^2}$$