Student ID:

Student Name:

Serial Number:

Math 102, Section 15
Spring 2016, Term 152

Quiz 5
Version A

Instructions: Show Your Work!

1. (3 pts) Calculate, if exists, the limit of the sequence.

$$\left\{\ln(2n+1)^2 - \ln(n+1)\right\}.$$

2. (3 pts) Determine whether the series is convergent or divergent. If it is convergent, find its sum.

$$\sum_{n=1}^{\infty}\left[\frac{1}{\pi^n} - \frac{1}{n(n+1)}\right]$$

3. (4 pts) Use the integral test to determine whether the series is convergent or divergent

$$\sum_{n=1}^{\infty}\left[\frac{\ln n}{n^3}\right]$$

Student ID:

Student Name:

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Math 102, Section 27
Spring 2016, Term 152

Quiz 5
Version B

Instructions: Show Your Work!

1. (3 pts) Calculate, if exists, the limit of the sequence.

$$\left\{ \sqrt[n]{2^{2+4n}} \right\}.$$

2. (3 pts) Determine whether the series is convergent or divergent. If it is convergent, find its sum.

$$\sum_{n=1}^{\infty} \left[\frac{1}{e^n} + \frac{1}{n(n+1)} \right]$$

3. (4 pts) Use the integral test to determine whether the series is convergent or divergent

$$\sum_{n=1}^{\infty} \left[\frac{\ln n}{n^3} \right]$$