Student ID:

Student Name:

Serial Number:

Math 102, Section 1
Summer 2017, Term 163
Instructions: Show Your Work!

Quiz 5
Version A

1. (4 pts) Assume that there is a sequence of numbers $\{a_n\}$ such that

$$a_1 + a_2 + a_3 + \cdots a_n = \sqrt[n]{2^{1+3n}}.$$

Compute

(a) $\displaystyle\sum_{n=1}^{\infty} a_n$

(b) $\displaystyle\lim_{n\to\infty} a_n$

2. (6 pts) Test the following series for convergence

(a) $\displaystyle\sum_{n=1}^{\infty} n\sin(1/n).$

(b) $\displaystyle\sum_{n=0}^{\infty}(-1)^n\frac{\pi^{2n}}{(2n)!}.$

Student ID:

Student Name:

Serial Number:

Math 102, Section 4
Summer 2017, Term 163
Instructions: Show Your Work!

Quiz 5
Version B

1. (4 pts) Assume that there is a sequence of numbers $\{a_n\}$ such that

$$a_1 + a_2 + a_3 + \cdots a_n = \left(1 + \frac{2}{n}\right)^n.$$

Compute

(a) $\displaystyle\sum_{n=1}^{\infty} a_n$

(b) $\displaystyle\lim_{n\to\infty} a_n$

2. (6 pts) Test the following series for convergence

(a) $\displaystyle\sum_{n=1}^{\infty} \tan(1/n).$

(b) $\displaystyle\sum_{n=1}^{\infty} \frac{n^{2n}}{(1+n)^{3n}}.$