

LAST NAME:

FIRST NAME:

MATH 009C - Summer 2017

Quiz 5: July 25, 2017

1. Determine whether the series converges or diverges. If it converges, find its sum (Show all the steps!).

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

Please, show all work.

2. Determine whether the series converges or diverges.

$$(a) \quad \sum_{n=1}^{\infty} n e^{-n}$$

$$(b) \quad \sum_{n=1}^{\infty} \frac{\arctan(n)}{n^3}$$

$$(c) \quad \sum_{n=1}^{\infty} \frac{1 + 5^n}{1 + 2^n}$$

Please, show all work.