

# MATH 102

## QUIZ 4A

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Name:

ST ID

section:

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1. Find the sum of  $\sum_{n=1}^{\infty} \frac{2}{n^2 + 4n + 3}$ .

2. Test the following series for convergence or divergence

(a)  $\sum_{n=1}^{\infty} \frac{e^{1/n}}{n^2}$ .

(b)  $\sum_{n=1}^{\infty} \tan\left(\frac{1}{n}\right)$

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

3. Find the value of  $x$  for which the following series converges. Find the sum of the series

$$\sum_0^{\infty} \frac{(x+3)^n}{2^n}$$

4. How many terms are required to ensure that the sum of the series  $\sum_1^{\infty} \frac{1}{n^4}$  is accurate to within 0.009