

QUIZ 8 - MATH 152

Friday, November 3

YOUR NAME: _____

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Read each problem **very carefully** before starting to solve it and do only what is asked. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. [4 points] Tell whether the series converges or diverges and, if it converges, find its sum.

$$\sum_{n=3}^{\infty} \frac{1}{n^2 - n}.$$

2. [4 points] Tell whether the series converges or diverges and, if it converges, find its sum.

$$\sum_{n=1}^{\infty} \left[\left(\frac{1}{3} \right)^n + \frac{2^n}{7^{n-1}} \right].$$

3. [4 points] Use the limit comparison test to tell whether the following series converges or diverges.

$$\sum_{n=1}^{\infty} \frac{n^2}{(n^3 + 5)^{5/4}}.$$