MATH 1B
QUIZ 4

Clearly state the tests and facts you use (such as the convergence of a particular geometric series).

1. Determine if the series converges or diverges.

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

2. Determine if the series converges or diverges.

$$\sum_{n=1}^{\infty} ne^{-n}$$

TURN PAGE FOR PROBLEM 3 →

3. a) Find a formula for the general term a_n of the sequence $\left\{\frac{2}{9}, \frac{4}{27}, \frac{8}{81}, \frac{16}{243}, \ldots\right\}$.

b) Determine if the **series** $\frac{2}{9} + \frac{4}{27} + \frac{8}{81} + \frac{16}{243} + \ldots$ converges. If so, find its value.