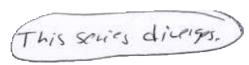
## \$ 142 Exqu4 Fall 2001

PRINT Your Name:

There are 10 problems on 5 pages. Each problems is worth 10 points. SHOW your work. | CIRCLE | your answer. NO CALCULATORS! If you want to pick up your exam before Monday, write a short note to that effect on the top of this page and I will leave your exam outside my office door, before I go home tonight.

1. Does  $\sum_{n=1}^{\infty} \frac{4}{n}$  converge? Justify your answer.

This series is 4 times the harmonic series. This series diverges.



2. Does  $\sum_{n=1}^{\infty} \frac{n+3}{n^2 \sqrt{n}}$  converge? Justify your answer.

Do a limit containson to  $\sum_{h=0}^{\infty} \frac{1}{h^3 L}$  , which concerges because it is a  $\gamma$ -swirt buth  $\gamma=\frac{3}{L}$  and  $\frac{3}{L} > 1$ . Know that I has concerned so both series concerned or both series winces. We have that I have concerned so the series also contracted as the series and so contracted as the series and series are series as the series and series are series as the series are series as the series are series and series are series as the series are series and series are series as the series are series as the series are series as the series are series are series and series are series are series and series are series