

NAME: _____

Instructions: This is your sixth quiz. This quiz will **NOT** be multiple choice, but will be a traditional quiz.

Problem 1:

Explain carefully the difference between a sequence and a series.

Problem 2: The series

$$5 + 5/4 + 5/16 + 5/64 + \dots$$

is a geometric series. Find a and r and determine if the series is convergent.

Problem 3: Is the series

$$\sum \frac{n^2 - 8}{n^2 + 5}$$

convergent? Clearly explain your reasoning.

Problem 4: Is the series

$$\sum_{n=2}^{\infty} \frac{1}{n(\ln |n|)^{1.5}}$$

convergent? Clearly explain your reasoning.