

**Quiz 5**

Name: \_\_\_\_\_

Answer all questions in a clear and concise manner. Unsupported answers will receive *no credit*.

1. By using the ratio test, we can conclude that the series

$$\sum_{i=1}^{\infty} \frac{(-1)^n}{n^2}$$

- A** converges absolutely
  - B** converges conditionally
  - C** the ratio test is inconclusive
  - D** diverges
2. Determine whether the series

$$\sum_{i=1}^{\infty} \left( \frac{1 - 2n}{3 + 5n} \right)^n$$

converges absolutely, converges conditionally, or diverges. Justify your answer using a convergence test.