QUIZ 5

(Math 200-Section A)

1. Use partial fractions to find the sum of the series $\sum_{n=1}^{\infty} \frac{4}{(4n-3)(4n+1)}$. (4 pts)

2. For the geometric series $\sum_{n=0}^{\infty} e^{-3n}$, find the following: (3 pts)

   (a) the first three terms (b) The ratio r (c) The sum of the series.

3. Use the Integral Test to determine whether the series $\sum_{n=1}^{\infty} \frac{3n}{\frac{3}{2}n^2 - 1}$ converges or diverges. (4 pts)

4. Use the Comparison Test to determine whether the series $\sum_{n=1}^{\infty} \frac{1+\sin n}{n^2}$ converges or diverges. (3 pts)

5. Use the Ratio Test to determine whether the series $\sum_{n=1}^{\infty} \frac{(n+1)(n+2)}{n!}$ converges or diverges. (3 pts)

6. Use the *n*-th Root Test to determine whether the series $\sum_{n=1}^{\infty} \frac{n^n}{(2^n)^2}$ converges or diverges. (3 pts)