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**MATH 107H Quiz 5**

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

Score: \_\_\_\_\_

**Instructions:** You must show supporting work to receive full and partial credits. No text book, notes, formula sheets allowed.

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**1(3pts)** Find the sum  $\sum_{n=3}^{\infty} (-1)^{n-1} \frac{3}{5^n}$

**2(2pts)** Determine if the infinite series converges  $\sum_{n=1}^{\infty} \frac{1}{e^{1/n}}$

**3(2pts)** Use logarithmic technique to find the limit  $\lim_{n \rightarrow \infty} \left(\frac{1}{n}\right)^{1/(\ln n)}$

**4(3pts)** Use the Integral Test to determine if  $\sum_{n=2}^{\infty} \frac{1}{n \ln n}$  converges.

(... The End)