Name:_____   Score:_____

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

1(3pts) Find the sum $\displaystyle\sum_{n=2}^{\infty}(-1)^n\frac{5}{3^{n+1}}$

2(2pts) Determine if the infinite series converges $\displaystyle\sum_{n=1}^{\infty}\frac{n^{0.01}}{\arctan n}$

3(2pts) Find the limit $\displaystyle\lim_{n\to\infty}\sqrt{\frac{2n}{n+1}}$

4(3pts) Use logarithmic technique to find the limit $\displaystyle\lim_{n\to\infty}\left(\frac{1}{n}\right)^{1/(\ln n)}$

(... The End)