

Quiz 2

Consider the series $\sum_{n=1}^{\infty} (e^{1/n} - e^{1/(n+1)})$.

1. Find an explicit formula for s_n .

2. Use **Part 1** to determine whether the series converges or diverges.

3. Compute the limit $\lim_{x \rightarrow \infty} x^2 (e^{1/x} - e^{1/(x+1)})$.

4. Use **Part 3** and comparison with a suitable p -series to determine whether the series converges or diverges.