

Math 276 Discussion Worksheet 6

1. Evaluate the following limits.

a. $\lim_{n \rightarrow \infty} n \sin \frac{1}{n}$

b. $\lim_{n \rightarrow \infty} \sqrt[n]{n}$

2. Determine the convergence or divergence of the following series.

a. $\sum_{n=1}^{\infty} \frac{(-1)^n}{n^{1/n}}$

b. $\sum_{n=1}^{\infty} \tan \frac{1}{n}$

3. Determine the convergence or divergence of the following series.

a. $\sum_{n=1}^{\infty} \frac{\log n}{n^2}$

b. $\sum_{n=1}^{\infty} \frac{2^n}{n^n}$