WRITE YOUR NAME:

MAC 2312 WRITTEN HOMEWORK #9
Due Thursday March 21st, in Canvas

Question 1. For each of the following, determine (with reasons) whether the series converges or diverges.

(a) $\displaystyle\sum_{n=1}^{\infty} \frac{83}{n}$

(b) $\displaystyle\sum_{n=17}^{\infty} \frac{1}{n}$

(c) $\displaystyle\sum_{n=1}^{\infty} \frac{83}{n^2}$

(d) $\displaystyle\sum_{n=17}^{\infty} \frac{1}{n^2}$

Question 2. For each of the following, determine (with reasons) whether the series converges or diverges.

(a) $\displaystyle\sum_{n=1}^{\infty} \frac{3n+2}{4n+3}$

(b) $\displaystyle\sum_{n=0}^{\infty} \frac{2^n + n}{3^n}$

(c) $\displaystyle\sum_{n=2}^{\infty} \frac{1}{n(\ln n)^2}$

(d) $\displaystyle\sum_{n=1}^{\infty} \frac{1}{n + \ln n}$