Math 151 **Name (Print):** _____
Spring 2021 TA: _____
Week 10 Section # _____

(Ex6,7P725) 1. Use the Integral Test to determine whether the series is convergent or divergent. If convergent find an **upper bound**!

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

(b) $\sum_{n=1}^{\infty} \frac{n}{n^2+1}$

(Ex4,6,7P731) 2. Determine whether the series is convergent or divergent. If convergent find an **upper bound**!

(a) $\sum_{n=2}^{\infty} \frac{1}{\sqrt{n}-1}$

(b) $\sum_{n=1}^{\infty} \frac{n-1}{n^3+1}$

(c) $\sum_{n=1}^{\infty} \frac{9^n}{3+10^n}$

(Ex11P726) 3. Determine whether the series is convergent or divergent. If convergent find an **upper bound**!

$$1 + \frac{1}{8} + \frac{1}{27} + \frac{1}{64} + \frac{1}{125} + \cdots$$

(Ex32P726) 4. Find the values of p for which the series $\sum_{n=1}^{\infty} \frac{\ln n}{n^p}$ is convergent.