# MATH 5B - Single Variable Calculus II — Spring 2019

## §11.4 The Comparison Tests

### In-class Activity 11.4

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### Activity 1:

Use the comparison test to determine whether $\sum_{n=1}^{\infty} \frac{5}{2n^2+4n+3}$ converges or diverges.

### Activity 2:

Use the comparison test to determine whether $\sum_{n=1}^{\infty} \frac{\ln(n)}{n}$ converges or diverges.

*(Hint: ignore the first few terms then compare.)*

## Activity 3:

Use the limit comparison test to determine whether the series converges or diverges.

(a) $\displaystyle\sum_{n=0}^{\infty} \frac{1}{3^n - 4}$

(b) $\displaystyle\sum_{k=0}^{\infty} \frac{2k^3 - 5k - 3}{\sqrt{7 + k^8}}$