

MAT 21A, Fall 2021
Homework 6

Due before 2:10 on Wednesday, November 10

Please write the homework solutions in connected sentences and explain your work. Mark the answers to each question. Scan or take pictures of your homework and upload it to Gradescope before due time.

In the first three problems:

- Find the intervals where the function is increasing or decreasing
 - Find all local maximums and minimums
 - Graph the function using this information
1. $f(x) = 5 - 2x - x^2$
 2. $f(x) = x^4 + 2x^3$
 3. $f(x) = \frac{e^x}{x}$
 4. Find the absolute maximum and the absolute minimum of the function $f(x) = e^{-3x^2}$ on the interval $[-2, 1]$.