

MAT 21A, Spring 2017

Homework Assignment 6

Due before the start of the class on Wednesday, May 31

Please read Sections 4.3 and 4.4 of the textbook before starting on the problem set.

Written Assignment:

Section 4.4: In first three problems, identify the coordinates of any local and absolute extreme points and inflection points, then graph the function:

10. $y = 6 - 2x - x^2$

20. $y = x^4 + 2x^3$

50. $y = \frac{e^x}{x}$

90. Graph the rational function

$$y = \frac{x^2}{x^2 - 1}$$

using all steps in the graphing procedure on page 249: (1) Identify the domain (2) Find the derivatives y' and y'' (3) Find the critical points (4) Find where the function is increasing and where it is decreasing (5) Find inflection points and determine the concavity of the curve (6) Identify vertical and horizontal asymptotes (7) Sketch the graph.

The homework must be legible, and written in connected sentences that explains what you are doing. Just the answer (whether correct or not) is not enough. Please put your name and section number on every page and staple the pages together. Homework should be handed in on time, late homework will not be graded.