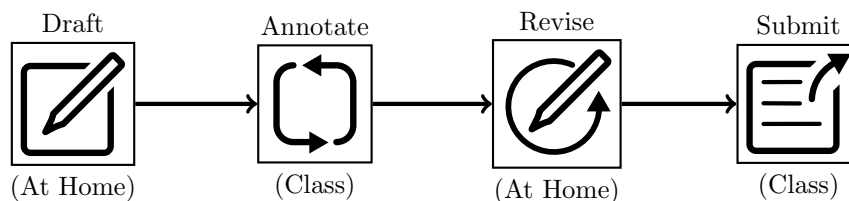


Math 130: PAR04

Initial Solution due Wed, Mar 11

Name: _____

Final Solution due Fri, Mar 13

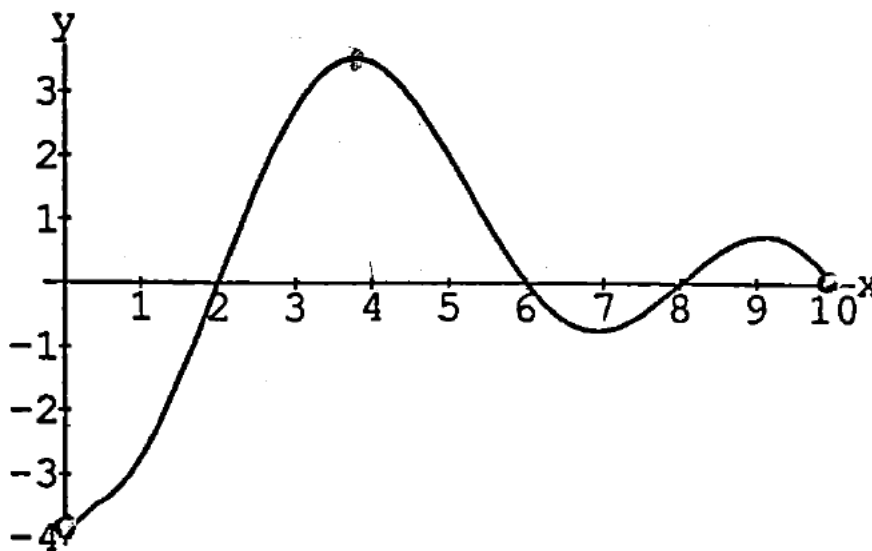


Bring your initial thoughts about the problem to class on the initial due date to discuss it with your peers. Based on the discussion and feedback, you may revise your solution before turning in your final solution. Your final solution should follow the guidelines outlined in the syllabus.

(Developed from D. Reinholz’s work on PAR. https://newscenter.sdsu.edu/education/crmse/daniel_reinholz.aspx)

Problem Statement (A Sketchy Problem)

Below is the graph of the *derivative* of a function f . (i.e. you have a graph of f')



Use this graph to answer the following questions about f on $(0,10)$. For each part of the problem, be sure to explain how you know.

1. On which subinterval(s) is f increasing? On which subinterval(s) is f decreasing?
2. Find all critical numbers on $(0, 10)$. Which of these are local maxima? Which are local minima? Which are neither?
3. On which subinterval(s) is f concave up? On which subinterval(s) is f concave down? What are the coordinates of all points of inflection of f ?
4. Sketch a graph of f and f'' .

