Main Exercises Week 7

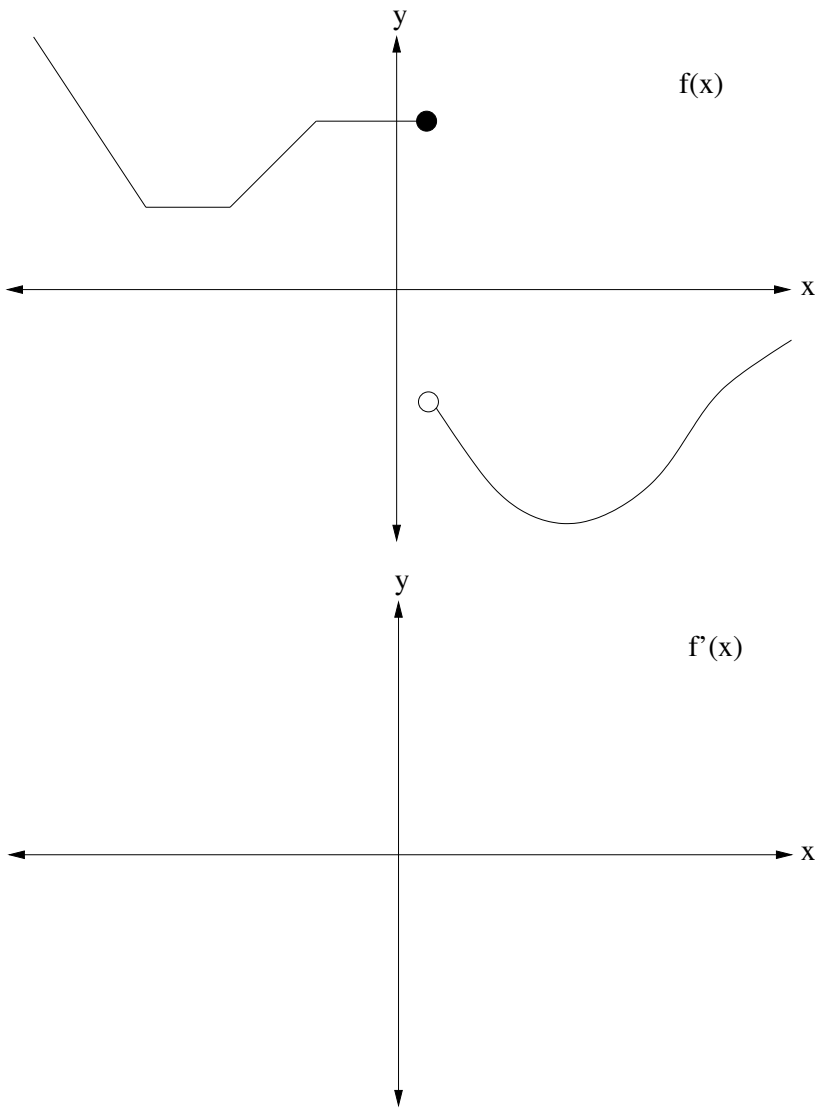
MATH 130: Calculus I, Sections 2 and 3 Your Name (Print): _____

Complete the first question **on this handout**. The other question may be done on another piece of paper or on the handout. **Follow the general guidelines for the Main Exercises assignments (the salmon colored handout).** Be sure to **staple** together your pages if you have more than one, and include your **name** and which **section** of calculus you are in at the top. Neatness is appreciated and makes a good first impression!!!

Due: at the beginning of class on Friday, October 11th

Remember: Your write-up should be your own. You may discuss these problems, but you should be alone when you write them up, using only outlines of any group or TA discussions.

1. Given the graph of $y = f(x)$, sketch the graph of $f'(x)$ below.



2. Let $f(x) = x^3 + \frac{15}{2}x^2 - 72x$.

(a) Find the values of x at which the tangent line to f is horizontal. Write a complete sentence explaining your thought process. Be sure to show all your work clearly.

(b) Find the values of x at which the tangent line to f has slope 36. Write a complete sentence explaining your thought process. Be sure to show all your work clearly.