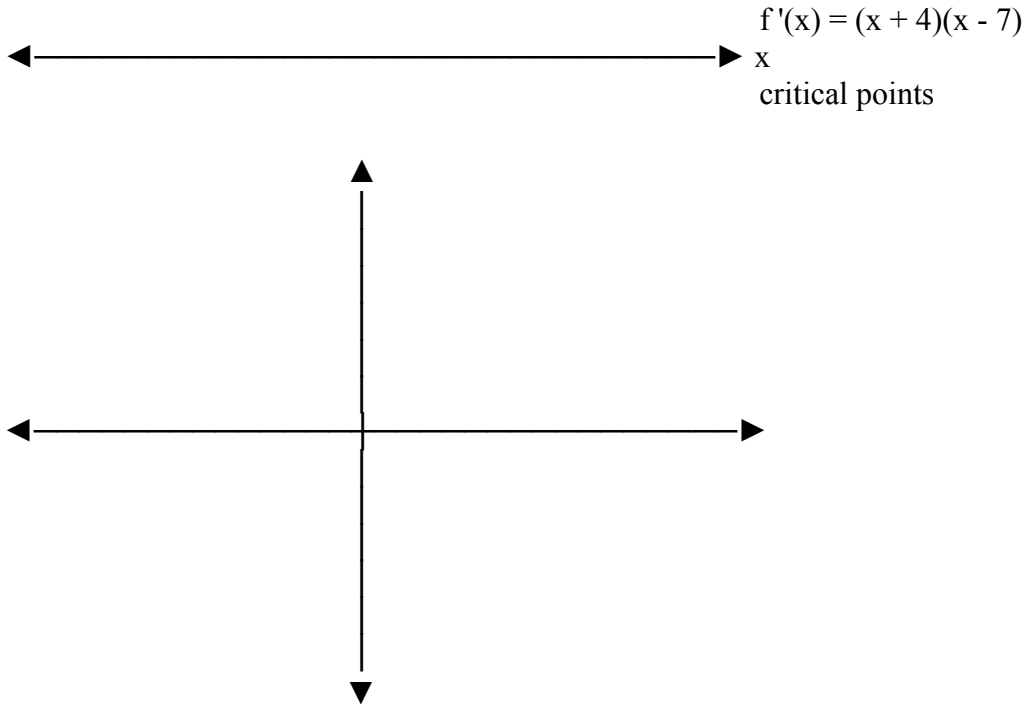


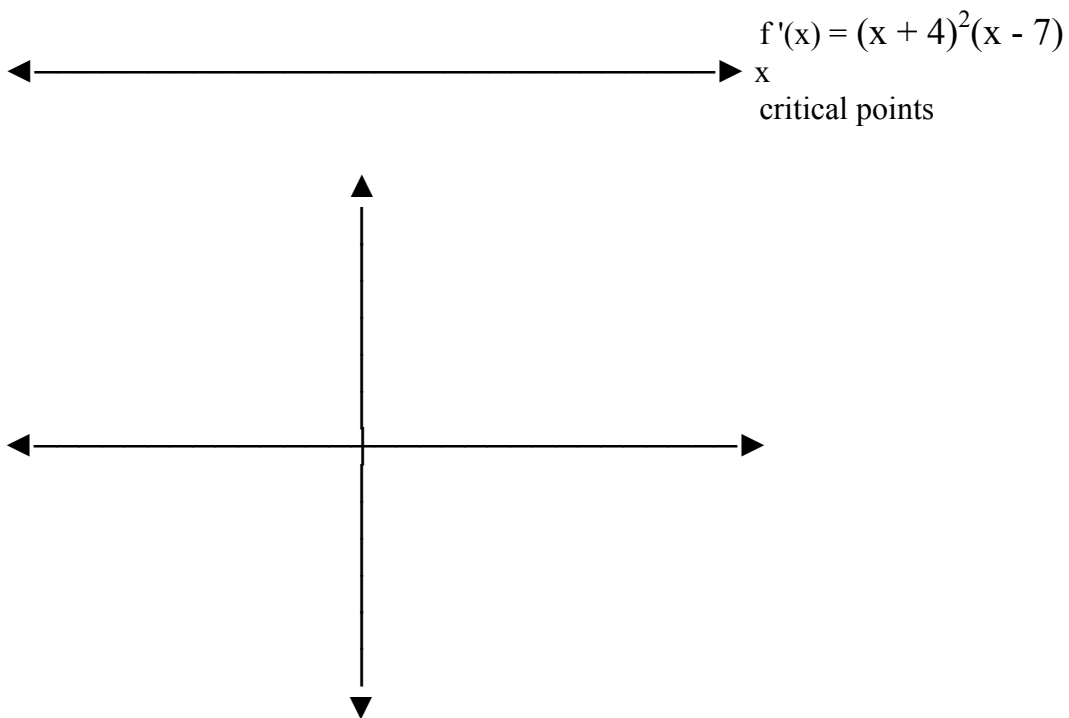
For each problem, you are given the derivative. Do the following:

- 1) Find all the critical points and locate them on the number line.
- 2) Test each region and mark above the number line either + or - .
- 3) Label each critical point as Max, Min, or FA.
- 4) Sketch the graph with the information you have.

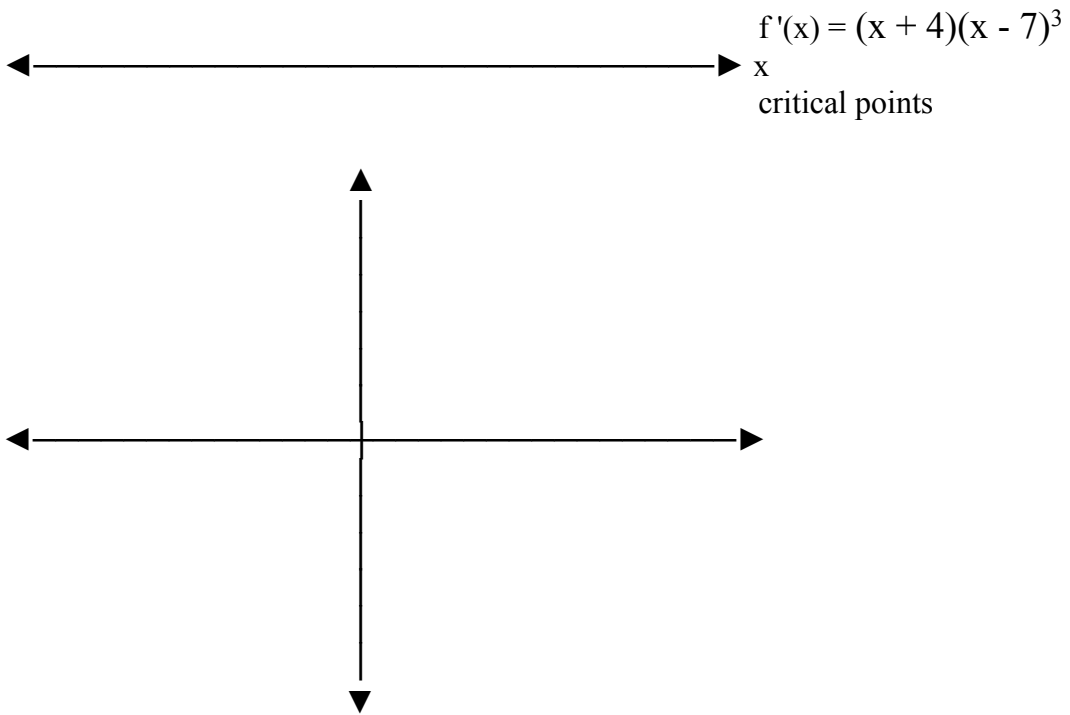
Problem 1



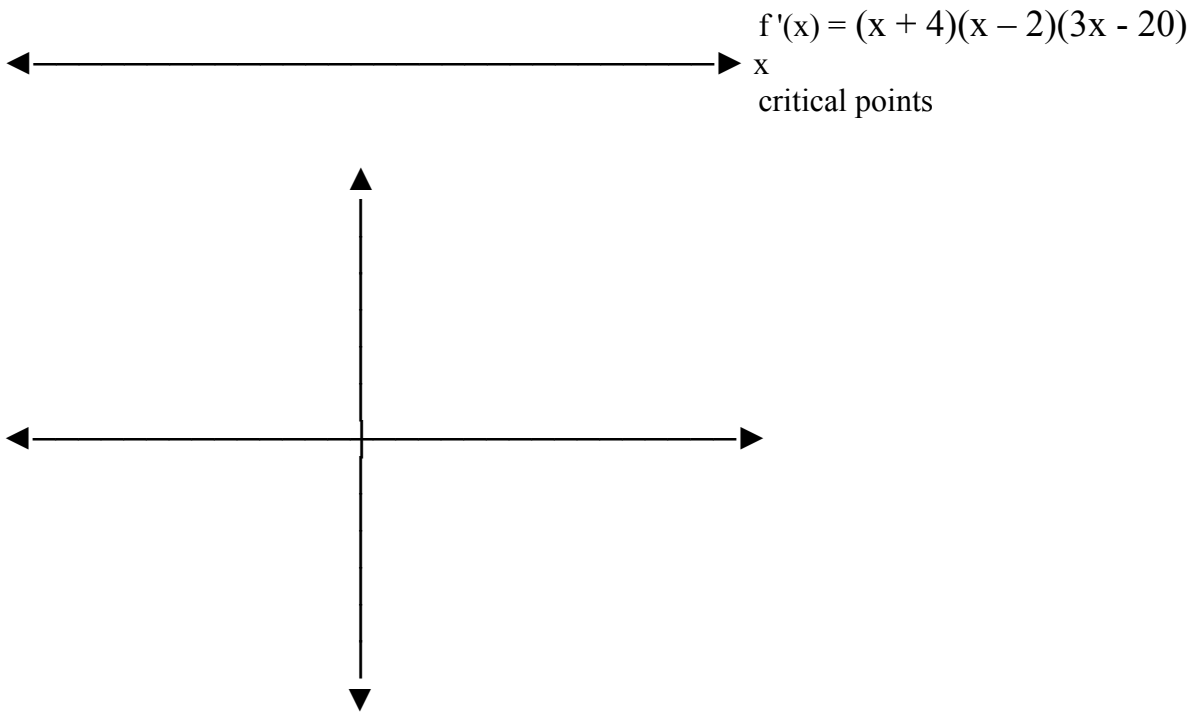
Problem 2



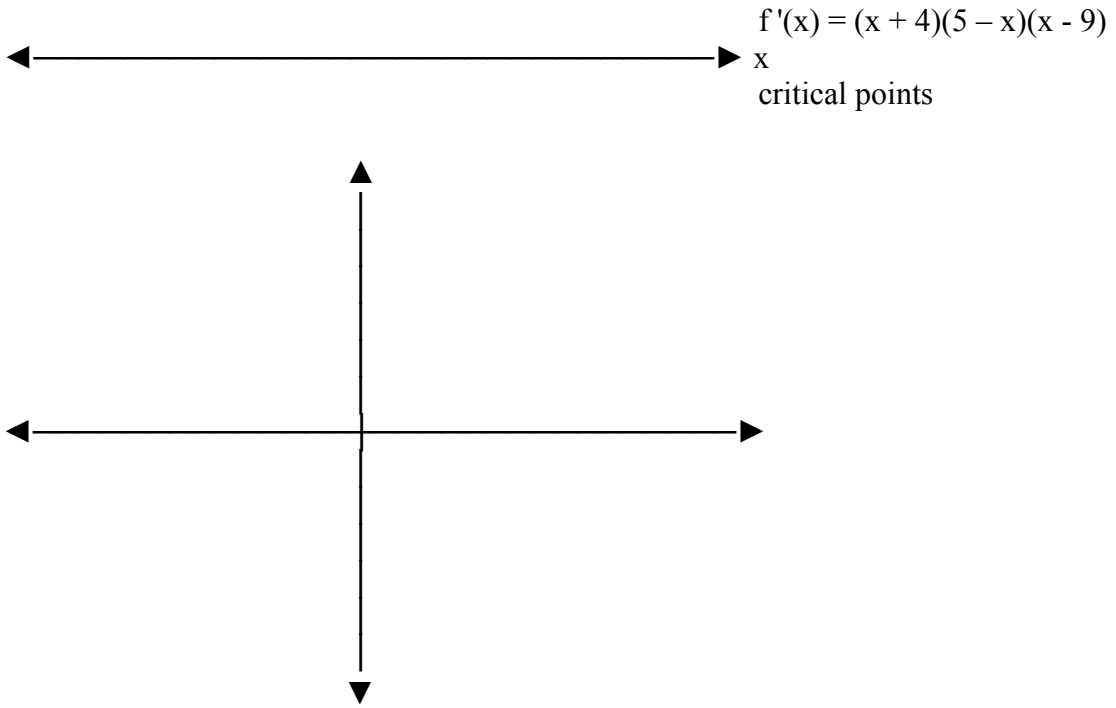
Problem 3



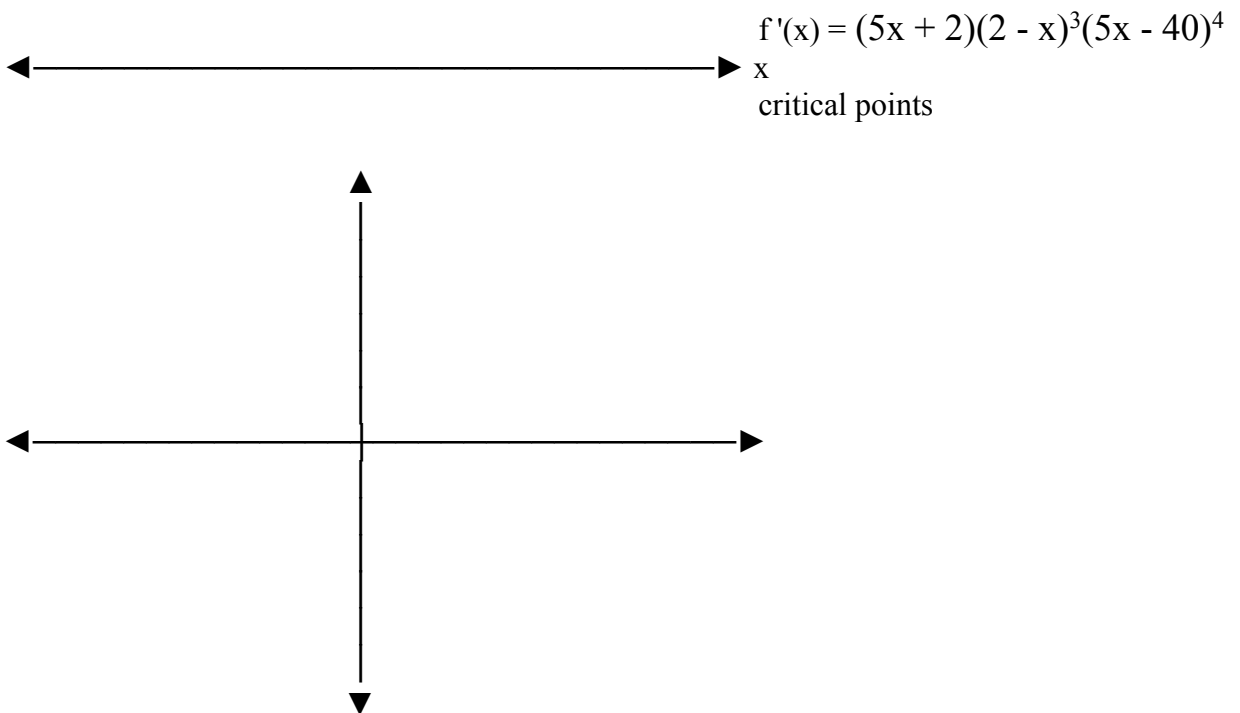
Problem 4



Problem 5



Problem 6



Problem 7. This last problem is a little different. I am going to give you $f(x)$. You find $f'(x)$ (take the derivative) and use it to find the critical points by setting $f'(x) = 0$ and solving that equation. Then draw your sign graph and then sketch the graph. What is different for this problem is that, now that you know what $f(x)$ is, you can find the y-coordinates and make a more accurate sketch. Give it a try.

$$f(x) = -x^2 + 30x - 214$$

