Part I (due at the beginning of class Wednesday, October 8)

Do Example 3 on the Product and Quotient Rules handout. You will not turn this in, but I will check that you've done it.

Part II: WeBWorK (due Saturday, October 11, by 11 PM)

Click here for your WeBWorK assignment. Complete the DW 15 WeBWorK assignment.

Part III: Homework Problems (due Friday, October 10 at the beginning of class)

1. For each part, sketch a graph of a function $f(x)$ that satisfies the description or explain why such a function is impossible to sketch. For those that are possible, explain why the function fails to be differentiable or continuous in the places where it fails to be those things.
   (a) $f(x)$ is differentiable everywhere except at $x = -3$ and $x = 2$ and continuous everywhere except at $x = 2$
   (b) $f(x)$ is differentiable everywhere except at $x = -1$, $x = 0$, and $x = 1$; $\lim_{x \to 1^-} f(x) = 1$; $\lim_{x \to 1^+} f(x) = 2$
   (c) $f(x)$ fails to be continuous in 3 places for different reasons and $f(x)$ fails to be differentiable in two places for different reasons