Part I (due at the beginning of class Wednesday, November 5)

Do the front of the bright green Graph Sketching and Asymptotes handout and read the top of the back, stopping when you get to Example 2.

Part II: WeBWorK (due Saturday, November 8, by 11 PM)

Click here for your WeBWorK assignment. Complete the DW 25 WeBWorK assignment.

Part III: Homework Problems (due Wednesday, November 5 at the beginning of class)

1. For each part, sketch a graph of a function that meets each of the given conditions or explain why such a graph is impossible to sketch.

   (a) $f(1) = 5$, $f(4) = 2$, $f'(1) = f'(4) = 0$, $f'(x) > 0$ for $x < 1$, and $f'(x) \leq 0$ for $x > 14$

   (b) $f'(x) > 0$ for $x < 5$, $f(5) = 7$, $f'(x) < 0$ for $x > 5$, and $f(x)$ has a local minimum at $x = 5$.

   (c) $f'(4) = f'(10) = 0$, $f'(x) < 0$ if $|x| < 2$, $f'(x) \geq 0$ if $2 < x < 10$, $f'(x) < 0$ if $x > 10$, $f'(x) = 1$ if $x < -2$, and $\lim_{x \to -2^+} f'(x) = -1$.

2. The graph of the **derivative** of $f(x)$ is given below. At what x-values does the original function $f(x)$ have a maximum? At what x-values does $f(x)$ have a minimum? Explain your answers.