Write a final draft of your solutions on clean paper (without ragged edges), leave me a generous amount of space around each problem to write comments, and staple multiple pages. Due at the beginning of class Thursday, October 27.

0. First, review the "Writing Tips for Limits" page from Moodle. I'll be looking to see if you've followed the guidelines as I grade the limits in problem #1.

(16 pt) 1. For each of the following functions, set up and evaluate a limit to find a simple formula for $f'(x)$.

    a. $f(x) = 4x^2 - 6x$ b. $f(x) = \sqrt{x + 7}$

(4 pt) 2. Review the limits you have written above.

    a. Have you dropped any limit signs prematurely (before you evaluate the limit)?

    b. Have you written any "unattached" limit signs?

    c. Have you left me a generous amount of space around each problem?

(5 pt) 2. If $f(x) = \sqrt{3x^2 + 1}$ then it turns out that $f'(x) = \dfrac{3x}{\sqrt{3x^2 + 1}}$.

    a. Use the given information to find the slope of the tangent line to the graph of f at $x = 4$.

    b. And write an equation for the tangent line to the graph of f at $x = 4$.