You may use any work of yours that you made from last week. This includes, practice
book problems and worked out WebAssign problems. This does not include photocopies of
notes from the book or tutorials shown on WebAssign. Graphing calculators are also not
allowed. In short, you are only allowed to use work that you created.

Show all your work (numerically, algebraically, or geometrically) for each and simplify.
No credit is given without supporting work.

1. [2.5 each] Differentiate each of the following. Please do not simplify for this problem.
   \[ y = (3x - 5)^4 (7x^2 - 4)^{-3} \]

   \[ y = 2^{4-x^2} \]
2. Consider the curve sometimes called the L’Hospital’s cubic determined by the relation

\[ y^2 = x^3 + 3x^2 \]

(a) [2] Use implicit differentiation to find \( \frac{dy}{dx} \).

(b) [3] Find the equation of the line tangent to L’Hospital’s curve when \( x = -1 \) and \( y < 0 \).