Name_____

Student I.D._____

Math 1210-1
Quiz 6
February 26, 2016

Directions: You may ask and answer each others questions on this quiz. The goal is to understand what you're doing and express your thoughts clearly. Write your own solutions though, rather than just copying someone elses. Calculators are not allowed on this quiz. Show your work.

1a) (2 points) For $y = \sqrt{x}$, compute dy in terms of x and dx.

1b) (3 points) Use differentials to approximate $\sqrt{24}$, using the fact that $\sqrt{25} = 5$.

2) (5 points) Use critical point analysis to find the maximum and minimum values of $f(x) = 2x^3 + 3x^2 - 12x$ on the interval $[-2, 2]$.