

Name _____

Section 0242

Answer all problems. There are 10 possible points.

1. Use the product and quotient rules to find derivatives of the following functions (Show all work to receive full credit!):

a) (3pts) $f(x) = (3x^2 + 4x)(x^{\frac{1}{5}} + 2)$

b) (3pts) $f(x) = \frac{x^3 + 2x^2 - 4}{x^3 + 3x}$

2. (4pts) Find the derivative of $f(x) = (x^2 + 7x + 1)^{\frac{1}{4}}$ (Show all work to receive full credit!).