

**Math 121****Quiz 2**

*No calculators permitted on this quiz. Justify all answers with neat and organized work. Clearly indicate your answers. 10 points possible.*

**1.** Simplify each expression. Do not leave negative exponents or fractional exponents in your answers. (Assume that all variables denote positive numbers.)

(a) (1 pt.)  $4^{-2}$

(b) (2 pts.)  $\left(\frac{3x^3}{y}\right)^{-2}$

(c) (2 pts.)  $\frac{x^{-4} \cdot x^{1/2}}{x^{5/2} \cdot x^{-1}}$

**2.** Find the product and simplify.

(a) (2 pts.)  $(2x + 3)^2$

(b) (3 pts.)  $(x + 2)(3x^2 + 4x + 5)$