MAT 012 Take-home Quiz 3: ch 7.4, ch 7.5 Name: _____

Due: see webpage **SHOW ALL WORK** Section: ____

1. Given $\frac{5}{x-5} - \frac{4}{x-4}$

   a) Give the LCD

   b) Perform the operation and simplify.

2. Given $\frac{15}{x^2-9} + \frac{5}{2x+6}$

   a) Rewrite the entire expression with factored denominators.

   b) Give the LCD

   c) Perform the operation and simplify. [Hint: *After combining, factor the numerator and cancel to simplify further*.]

3. Given $\frac{x^2}{x^2-4} - \frac{3}{x+2} = \frac{2x}{x^2-4}$

a) Rewrite the entire equation, but factor the denominators, which need to be factored.

b) Give the values of x for which the equation is not defined.

c) Give the LCD

d) Solve the equation. [**Don't forget to check** if your solutions "candidates" are actual solutions]

e) State the answer(s)