Chapter 8 Exam	**Name: _____**
MAT 1033C	**Date: _____**
Larson Book	**Section: _____**
Quadratic Equations (V6) Take Home	

You MUST show your work to receive full credit. This exam is worth 100 points. Each problem is worth 6 points unless otherwise specified. Good Luck!

1. Solve by factoring: $2x^2 - 4x = 70$

2. Solve by completing the square: $x^2 + 16x + 7 = 0$

3. Solve using the quadratic formula: $7x^2 - 3x = -2$

4. Use Richard's formula to solve $x^2 - 10x - 12 = 0$

5. Using the discriminant, determine how many unique solutions each equation has and what type of solution(s) they are.

$-4x^2 + 5x + 9 = 0$

6. The product of two consecutive odd integers is 22 less than 15 times the smaller integer. Find the integers.

Solve each equation using the method of your choice.

7. $9(x - 8)^2 = 36$

8. $27x^2 - 49 = 0$

9. $-16x = -x^2$

10. $3x^2 - 2x - 4 = 0$

11. $x^3 - 4x^2 + 4x = 0$

12. $x^2 + 69 = 0$

13. Let $y = -4(x-8)^2 + 3$ (a – f) 2 points each

a) Find the vertex of the parabola

b) Does this parabola open up or down? _____

c) Is this parabola "wide", "narrow", or "standard"?

d) Find its x-intercept(s)

e) Find its y-intercept

f) Graph this parabola

14. Let $y = 3x^2 - 5x - 10$ (a – f) 2 points each

g) Find the vertex of the parabola

h) Does this parabola open up or down? _____

i) Is this parabola "wide", "narrow", or "standard"?

j) Find its x-intercept(s)

k) Find its y-intercept

l) Graph this parabola

BONUS PROBLEM

4 points

1. Solve $-5x^2 - 2x = 10$ using Richard's Formula.