

Name:

HW 3: §C.1-C.3

Complete the following problems to the best of your ability. **SHOW ALL OF YOUR WORK.** Unshown work will not be graded. You may use a calculator.

1. Solve the following equations for  $x$ .

(a)  $2x - 4 = 7$

(b)  $\frac{x}{3} - \frac{1}{2} = -\frac{2}{3}$

(c)  $x^2 - 9 = -5$

(d)  $\sqrt[3]{x} = 4$

(e)  $x^2 = 3x - 2$

(f)  $4 = -x^2 + 4x$

2. Solve the equation  $x^2 - 4x + 2 = 0$  by completing the square.

3. Solve the equation  $3x^2 + 6x - 5 = 0$  by using the quadratic formula.

4. Solve the following inequalities for  $x$ .

(a)  $5 \leq 3x - 4 < 14$

(b)  $x^2 \geq 9$  (be careful with this one!)

**Optional Problems:**

C.1: All

C.2: 1-36

C.3: 1, 2, 11-34