

Name:

Quiz 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. [30] Solve the following equations.

(a) $x^2 = x + 6$

(b) $x^4 = 16$

(c) $2x - 3 = 15$

2. [20] Given the equation $2x + 4t = 9 - 3t$,

(a) Solve for x in terms of t .

(b) Solve for t in terms of x .

3. [20] Consider the equation $4x^2 = 10x - 4$.

(a) How many solutions does the equation have? How can you know this without actually solving the equation?

(b) Find the solutions to this equation, if it has any.

4. [30] Solve the following inequalities. Give your answer in **interval notation**.

(a) $-3 \leq -2x + 4 < 8$

(b) $x^2 - 3x \geq 4$