Name: **ILP#:_____**   **Due _____**

<u>Math D Unit 4 Activity- Quadratic Equations & Functions – 10 points</u>

You may get help from each other, the textbook, tutors, or any others. Just make sure you show your work. Each problem is 1 point unless otherwise noted.

1. Simplify without using a calculator.

   a) $\dfrac{5\sqrt{3}}{3\sqrt{5}}$ b) $\dfrac{2i+1}{3+i}$

2. Solve the equation.

   $\sqrt{2x+7} - x = 2$

3. Simplify without using a calculator.

   a) $\sqrt{-6} \cdot \sqrt{-12} \cdot \sqrt{-6}$ b) $4i^{23} + 3i^{33} - i^{41}$

4. Solve the inequality and graph the solution set on a real number line. Write your answer in **Interval Notation.**

    a) $\dfrac{x+3}{x-4} \le 5$

5. Solve the following equations by the method indicated:
    (2 points each)

    a) $4x^2 = 12x + 6$ (By Quadratic Formula)

    b) $3x^2 + 2 = -4x$ (By Completing the Square)