**Unit 3 Day 2 Notes: Quadratic Formula and Imaginary Numbers**

***Imaginary Numbers***

* You can’t take the square root of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* If you get a negative number under you square root while using the quadratic equation, your answer will be an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + What is an imaginary number?
    - The imaginary number is defined as the number whose square is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

So

Examples:

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Recall: Quadratic Formula**

-The quadratic formula can be used to solve any quadratic. It is the simplest way to solve quadratics that are non-factorable (those that have imaginary solution). Make sure the equation equals 0 before you use the Quadratic Formula!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Example #1: Find the solutions for

a = \_\_\_\_\_\_\_

b = \_\_\_\_\_\_\_

c = \_\_\_\_\_\_\_

Example #2: Find the solutions of

a = \_\_\_\_\_\_\_

b = \_\_\_\_\_\_\_

c = \_\_\_\_\_\_\_

Example #3: Find the solutions of

a = \_\_\_\_\_\_\_

b = \_\_\_\_\_\_\_

c = \_\_\_\_\_\_\_

Example #4: Find the solutions of

a = \_\_\_\_\_\_\_

b = \_\_\_\_\_\_\_

c = \_\_\_\_\_\_\_

Example #5: Find the solutions of

a = \_\_\_\_\_\_\_

b = \_\_\_\_\_\_\_

c = \_\_\_\_\_\_\_

Example #6: Find the solutions of

a = \_\_\_\_\_\_\_

b = \_\_\_\_\_\_\_

c = \_\_\_\_\_\_\_