Unit 1 – Practice 4 Quadratic Formula and Discriminant: **Name:** _____

Standard Form: $y = ax^2 + bx + c$ **Quadratic Formula:** $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Find the Discriminant of the following and identify how many solutions it has and whether or not they are real or imaginary:

1. $2x^2 + 3x + 5 = 0$ **a = ___ b = ___ c = ___**

2. $x^2 – 4x + 3 = 0$ **a = ___ b = ___ c = ___**

3. $x^2 + 5x + 2 = 0$ **a = ___ b = ___ c = ___**

4. $9x^2 + 12x + 4 = 0$ **a = ___ b = ___ c = ___**

5. $4x^2 – 4x + 1 = 0$ **a = ___ b = ___ c = ___**

6. $x^2 + 2x + 5 = 0$ **a = ___ b = ___ c = ___**

Use the Quadratic Formula to solve the following:

1. $x^2 - 6x + 11 = 0$ **a = ___ b = ___ c = ___**

2. $2x^2 - 4x + 2 = 0$ **a = ___ b = ___ c = ___**

3. $x^2 + 2x - 6 = 0$ **a = ___ b = ___ c = ___**

4. $x^2 - 4 = 0$ **a = ___ b = ___ c = ___**

5. $-2x^2 = 0$ **a = ___ b = ___ c = ___**

6. $x^2 - 4x + 4 = 0$ **a = ___ b = ___ c = ___**