Name: _____ Date: _____

THE DISCRIMINANT

For #1-9, each quadratic equation is of the form $ax^2 + bx + c = 0$. Use the discriminant t the right and circle whether the amount of real solutions is 2, 1 or 0. Show work.

$(b)^2 - 4(a)(c)$

1 $x^2 - 3x - 4 = 0$

a = ____ b = ____ c = ____

$(\quad)^2 - 4(\quad)(\quad)$

2 real solutions ($b^2 - 4ac > 0$)

1 real solution ($b^2 - 4ac = 0$)

0 real solutions ($b^2 - 4ac < 0$)

2 $x^2 + 2x + 5 = 0$

a = ____ b = ____ c = ____

$(\quad)^2 - 4(\quad)(\quad)$

2 real solutions ($b^2 - 4ac > 0$)

1 real solution ($b^2 - 4ac = 0$)

0 real solutions ($b^2 - 4ac < 0$)

3 $x^2 - 4x + 4 = 0$

a = ____ b = ____ c = ____

$(\quad)^2 - 4(\quad)(\quad)$

2 real solutions ($b^2 - 4ac > 0$)

1 real solution ($b^2 - 4ac = 0$)

0 real solutions ($b^2 - 4ac < 0$)

4 $4x^2 - 4x + 1 = 0$

a = ____ b = ____ c = ____

$(\quad)^2 - 4(\quad)(\quad)$

2 real solutions ($b^2 - 4ac > 0$)

1 real solution ($b^2 - 4ac = 0$)

0 real solutions ($b^2 - 4ac < 0$)

5 $2x^2 - 5x - 7 = 0$

a = ____ b = ____ c = ____

$(\quad)^2 - 4(\quad)(\quad)$

2 real solutions ($b^2 - 4ac > 0$)

1 real solution ($b^2 - 4ac = 0$)

0 real solutions ($b^2 - 4ac < 0$)

6 $3x^2 + 5x + 4 = 0$

a = ____ b = ____ c = ____

$(\quad)^2 - 4(\quad)(\quad)$

2 real solutions ($b^2 - 4ac > 0$)

1 real solution ($b^2 - 4ac = 0$)

0 real solutions ($b^2 - 4ac < 0$)