Algebra
Unit 8 - Discriminant 

Name Key

1-6 Evaluate the discriminant to determine the number of solutions. SHOW ALL WORK

1. $2x^2+x=8$ $2x^2+x-8=0$

$(1)^2+-4(2)(-8)$

$1+64$

Discriminant 65

Number of roots 2

2. $7x^2+6x+2=0$ $(6)^2+-4(7)(2)$

$36+-56$

Discriminant -20

Number of roots 0

3. $x^2-8x+16=0$ $(-8)^2+-4(1)(16)$

$64+-64$

Discriminant 0

Number of roots 1

4. $10=x^2-5x$ $0=x^2-5x-10$ $(-5)^2+-4(1)(-10)$

$25+40$

Discriminant 65

Number of roots 2

5. $8x^2+9=4x^2-4x+8$ $0=-4x^2-4x-1$

$(-4)^2+-4(-4)(-1)$

$16+-16$

Discriminant 0

Number of roots 1

6. $w^2-7w+29=4-7w$ $+7w$ $+7w$

$w^2+29=4$

-4 -4

$w^2+25=0$

$(0)^2+-4(1)(25)$

$0+-100$

Discriminant -100

Number of roots 0

On the back of this paper, pick three of any of the above problems to solve using the Quadratic Formula!