

Solve Quadratics RWS #1

Student: \_\_\_\_\_



#1-3, Solve by factoring.

1.  $a^2 + a - 6 = 0$

$(a+3)(a-2)$   
 $\{-3, 2\}$

2.  $a^2 + 19a = -34$

$(a+17)(a+2)$   
 $\{-17, -2\}$

3.  $a^2 = 12a + 28$

$a^2 - 12a - 28 = 0$   
 $(a+2)(a-14)$   
 $\{2, 14\}$

#4-6, Solve by completing the square

4.  $L^2 - 6L = 14$

$L^2 - 6L + 9 = 23$   
 $(L-3)^2 = 23$   
 $L-3 = \pm 4.8$   
 $7.8 \text{ or } -1.8$

5.  $L^2 - 5 = 2L$

$L^2 - 2L = 5$   
 $(L-1)^2 = 6$   
 $L-1 = \pm 2.45$   
 $3.45 \text{ or } -1.45$

6.  $L^2 + 20L = 3$

$L^2 + 20L + 100 = 103$   
 $(L+10)^2 = 103$   
 $L+10 = \pm 10.15$   
 $.15 \text{ or } -20.15$

#7-9, Solve using the Quadratic Formula.

7.  $g^2 - 2g = 4$

$g^2 - 2g - 4 = 0$   
 $a=1 \quad b=-2 \quad c=-4$   
 $\frac{2 \pm \sqrt{20}}{2}$   
 $3.24 \text{ or } -1.24$

8.  $g^2 + 6g + 3 = 0$

$a=1 \quad b=6 \quad c=3$   
 $\frac{-6 \pm \sqrt{24}}{2}$   
 $-0.55 \text{ or } -5.45$

9.  $3g^2 = 5 - g$

$3g^2 + g - 5 = 0$   
 $a=3 \quad b=1 \quad c=-5$   
 $\frac{-1 \pm \sqrt{61}}{6}$   
 $\{1.13, -1.47\}$

#10-15, Use the method you think most appropriate to solve each equation.

10.  $2x^2 - 5x - 1 = 0$

$2.69 \text{ or } -0.19$   
 $\frac{5 \pm \sqrt{33}}{4}$

11.  $x^2 - 3x - 4 = 0$

$\{4, -1\}$   
 $(x-4)(x+1)$

12.  $x^2 = 121$

$\pm 11$

13.  $x^2 + 6x = 11$

$1.47 \text{ or } -7.47$

$(x+3)^2 = 20$

14.  $2x^2 - 3x - 4 = 0$

$\{2.35, -0.85\}$

$\frac{3 \pm \sqrt{41}}{4}$

15.  $3x^2 - 2 = 46$

$\pm 4$

$3x^2 - 48 = 0$   
 $3(x^2 - 16)$   
 $3(x+4)(x-4)$