

**WORKSHEET CHAPTER 4: SOLVING QUADRATIC SYSTEMS****1-27: Find the solutions of each system of equations.**

1.  $x^2 + y^2 = 16$   
 $x = 2$

2.  $y = x^2$   
 $y - 2 = x$

3.  $x = y$   
 $\frac{x^2}{20} + \frac{y^2}{5} = 1$

4.  $x^2 - y = 4$   
 $y = 3x$

5.  $x^2 - y^2 = 9$   
 $8y = 4x - 12$

6.  $x^2 + y^2 = 25$   
 $x + y = -7$

7.  $(y - 1)^2 = x + 4$   
 $y + x = -1$

8.  $\frac{x^2}{16} + \frac{y^2}{4} = 1$   
 $2y + 5x = 4$

9.  $y^2 = x^2 + 9$   
 $y = 6$

10.  $x^2 + y^2 = 100$   
 $x - y = 2$

11.  $x^2 + y^2 = 9$   
 $x + y = 7$

12.  $x^2 + 4y^2 = 4$   
 $x - y = 6$

13.  $x^2 - 4y^2 = 16$   
 $y = 3x - 3$

14.  $x^2 + 4y^2 = 25$   
 $2y = 1 - x$

15.  $(x - 2)^2 + y^2 = 16$   
 $y - x = 2$

16.  $y = -x^2$   
 $y = -x - 2$

17.  $x^2 - 4y = 0$   
 $y - 2x = -3$

18.  $x^2 - 9y^2 = 36$   
 $y = x$

19.  $\frac{(x-3)^2}{25} + \frac{(y-4)^2}{9} = 1$   
 $5y + 3x = 44$

20.  $(x - 3)^2 + (y + 6)^2 = 36$   
 $y + 3 = x$

21.  $5x^2 + y^2 = 30$   
 $y^2 - 16 = 9x^2$

22.  $x^2 + y^2 = 5$   
 $2x^2 + y = 0$

23.  $2y^2 = 10 - x^2$   
 $3x^2 - 9 = y^2$

24.  $4x^2 + 9y^2 = 36$   
 $4x^2 - 9y^2 = 36$

25.  $x^2 + y^2 = 16$   
 $x^2 + y^2 = 9$

26.  $x^2 + y^2 = 64$   
 $x^2 + 64y^2 = 64$

27.  $x^2 - y^2 = 25$   
 $x^2 - y^2 = 7$

**27-45: Graph the solutions for each system of inequalities. Use graph paper provided.**

28.  $x^2 + y^2 < 9$   
 $y < -x^2$

29.  $\frac{x^2}{9} - \frac{y^2}{4} < 1$   
 $x^2 + y^2 < 25$

30.  $x^2 + y^2 \geq 4$   
 $x^2 + y^2 \leq 36$

31.  $\frac{x^2}{16} - y^2 \geq 1$   
 $x^2 + y^2 \geq 49$

32.  $\frac{x^2}{25} - \frac{y^2}{16} \geq 1$   
 $x - y \geq 2$

33.  $y \geq x^2 - 4$   
 $(y - 3)^2 \geq x + 2$

34.  $x^2 + y^2 > 16$   
 $81x^2 + 9y^2 < 729$

35.  $x^2 - 4y^2 < 16$   
 $x > y^2$

36.  $x + 3 = y$   
 $x^2 + y^2 < 25$

37.  $9x^2 + 4y^2 \leq 36$   
 $4x^2 + 9y^2 \geq 36$

38.  $x + 2y > 1$   
 $x^2 + y^2 < 25$

39.  $9x^2 - 4y^2 \geq 36$   
 $x + y = 4$