

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

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| 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.

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