Algebra 2

NAME_____

Chapter 3 Review A

Write the letter for the best answer.

Solve the equation by <u>Graphing</u>.

1. $f(x) = x^2 + 6x - 16$
2. $y = 2x^2 - 8x - 24$
3. $3x^2 = 2x - 5$

Solve the equation using <u>Square Roots</u>.

4. $x^2 + 19 = 44$
5. $(x + 2)^2 - 13 = 18$
6. $\frac{1}{3}(x - 3)^2 + 12 = 16$

Solve the equation by <u>Factoring</u>.

7. $0 = x^2 + 3x - 28$
8. $y = 2x^2 - 11x - 6$
9. $3x^2 + 13x + 15 = 3x + 23$

Find the square root of each.

10. $\sqrt{-36}$
11. $\sqrt{-54}$
12. $3\sqrt{-24}$

Simplify each expression.

13. $(7 - 4i) + (5 - 3i)$
14. $(-6 + 3i) - (4 - 2i)$
15. $(4 - 2i)(3 + 5i)$

Simplify each expression.

16. $(2 + 5i)(7 - 4i)$
17. $(3 + 6i)(3 - 6i)$
18. $(1 - 8i)^2$

Find the zeros of the function.

19. $0 = x^2 + 40$
20. $x^2 - 18 = -46$
21. $f(x) = 4x^2 + 48$

Solve the equation by using the Quadratic Formula.

22. $x^2 + 7x - 18 = 0$

23. $2x^2 - 3x = 4$

24. $2x^2 + 12 = 9x$

Solve the system by Graphing.

25. $y = x^2 + 2x - 8$
$y = x - 6$

26. $y = 3x^2 - 6x + 1$
$y = x + 1$

Solve the system using Substitution.

27. $y = x^2 - 12x + 35$
$y = x - 1$

28. $y = x^2 - 5$
$-2x = y - 3$

Solve the system by Elimination.

29. $x^2 + 4x - y = -4$
$-x + y = 4$

30. $y = 6x^2 - 4x + 4$
$y = 3x^2 - x - 2$

Graph the inequality.

31. $y \geq x^2 - 7$

32. $y < 2x^2 - 5x - 6$

Simplify the inequality algebraically.

33. $x^2 - 3x - 10 \geq 0$

34. $2x^2 - 5x - 3 < 0$