Name _____ Class _____ Date _____

Practice 7-8

Graphing Square Root and Other Radical Functions

Graph each function.

1. $y = -\sqrt{x + 2}$

2. $y = \sqrt{x - 3}$

3. $y = \sqrt{x} + 1$

4. $y = -\sqrt{x} - 1$

5. $y = \sqrt{x - 4} + 2$

6. $y = \sqrt{x + 1} - 3$

7. $y = \sqrt{x + 2} - 6$

8. $y = -\sqrt{x - 2} + 3$

9. $y = -\sqrt{x - 3} + 3$

10. $y = \sqrt{x + 3} - 2$

11. $y = \sqrt{x - 1} - 5$

12. $y = -\sqrt{x - 2} + 5$

13. $y = -\sqrt{x + 1} - 4$

14. $y = -\sqrt{x - 1} + 2$

15. $y = \sqrt{x - 1} + 3$

16. $y = \sqrt{x - 2} + 1$

17. $y = \sqrt{x + 2} - 2$

18. $y = \sqrt{x - 1} + 2$

19. $y = \sqrt{x + 1} + 4$

20. $y = \sqrt{x - 3} + 3$

21. $y = \sqrt{x + 1} - 2$

22. $y = \sqrt{x - 1} - 1$

23. $y = \sqrt{x + 3} - 3$

24. $y = \sqrt{x + 4} - 1$

25. $y = \sqrt{x - 2} - 4$

26. $y = \sqrt{x + 2} + 1$

27. $y = \sqrt{x - 2} + 3$

28. If you know the area A of a circle, you can use the equation $r = \sqrt{\frac{A}{\pi}}$ to find the radius r.

a. Graph the equation.

b. What is the radius of a circle with an area of 350 ft^2?

Solve each square root equation by graphing. Round the answer to the nearest hundredth if necessary. If there is no solution, explain why.

29. $\sqrt{x + 6} = 9$

30. $\sqrt{4x - 3} = 5$

31. $\sqrt{3x - 5} = \sqrt{1 - x}$

32. $3\sqrt{2x - 1} = 2\sqrt{x + 6}$

Rewrite each function to make it easy to graph using a translation. Describe the graph.

33. $y = \sqrt{81x + 162}$

34. $y = -\sqrt{4x + 20}$

35. $y = \sqrt[3]{125x - 250}$

36. $y = -\sqrt{64x + 192}$

37. $y = -\sqrt[3]{8x - 56} + 4$

38. $y = \sqrt{25x + 75} - 1$

Graph each function.

39. $y = \sqrt[3]{x - 1}$

40. $y = \sqrt[3]{x + 2} - 3$

41. $y = \sqrt[3]{x + 1} - 2$

42. $y = -\sqrt[3]{x} + 2$

43. $y = 2\sqrt[3]{x - 3}$

44. $y = \sqrt[3]{x + 3} - 1$