Name _____ Class _____ Date _____

Practice 6-7

Graphing Absolute Value Equations

Graph each equation by translating $y = |x|$.

1. $y = |x| - 3$

2. $y = |x| + 4$

3. $y = |x| - 1$

4. $y = |x| + \frac{1}{2}$

5. $y = |x| + 2\frac{1}{2}$

6. $y = |x| + 3$

7. $y = |x + 2|$

8. $y = |x - 4|$

9. $y = |3x|$

10. $y = |x + 3| - 2$

11. $y = |x - 2| + 1$

12. $y = |x - 3| + 2$

Graph each equation by translating $y = -|x|$.

13. $y = -|x| + 1$

14. $y = -|x + 2|$

15. $y = -|x| - 5$

16. $y = -|x - 4| + 2$

17. $y = -|x - 5|$

18. $y = -|x| + 4.5$

19. $y = -|x - 3| + 1$

20. $y = -|x + 1| + 3$

21. $y = -|x + 2| - 4$

Write an equation for each translation of $y = |x|$.

22. left 7 units

23. right 5 units

24. up 6 units

25. up 2 units, right 3 units

26. down 3 units, left 1 unit

27. down 1 unit, right 2 units

28. left 2 units, up 4 units

29. right 3 units, up 2 units

30. left 4 units, down 3.5 units

Write an equation for each translation of $y = -|x|$.

31. 3 units up

32. 3.5 units left

33. $\frac{3}{4}$ unit down

34. down 3 units

35. up 2 units, right 1 unit

36. down 5 units, left 1 unit

37. right 3 units, up 2 units

38. down 4 units, left 2 units

39. up 4 units, right 3 units

Write an equation for the given graphs.

40.

41.

42.

43.