Name _____ Date _____

Practice 81

For use with Section 10-6

Expand each product.

1. $(x + 1)(x + 4)$ **2.** $(x + 3)(x + 5)$ **3.** $(x - 2)(x + 2)$

4. $(x - 6)(x + 1)$ **5.** $(-x + 8)(x - 3)$ **6.** $(x - 7)(x + 9)$

7. $(x - 3)(x + 3)$ **8.** $(x - 6)(x - 6)$ **9.** $(-x - 8)(x - 5)$

10. $(x - 11)(x + 7)$ **11.** $(-x + 12)(x - 4)$ **12.** $(x - 9)(x - 4)$

13. $(5 - x)(2 + x)$ **14.** $(7 - x)(3 - x)$ **15.** $(x + 8)(2 - x)$

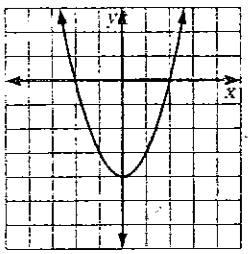
16. $(2x - 1)(x + 5)$ **17.** $(-3x + 2)(x + 6)$ **18.** $(3x - 4)(2x + 1)$

19. $(5x - 3)(4x - 1)$ **20.** $(8x + 3)(2x - 5)$ **21.** $(4x - 3)(-7x + 2)$

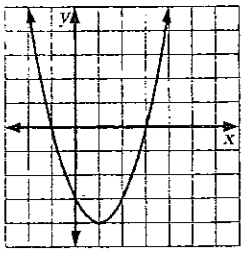
Match each equation with its graph.

22. $y = x^2 - 4$ **23.** $y = x^2 - 2x - 3$ **24.** $y = x^2 - 4x$

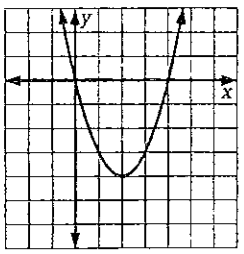
A.



B.



C.



Without graphing, find each feature of the graph of each equation.

a. the equation of the line of symmetry

b. the coordinates of the vertex

c. the y-intercept

25. $y = x^2 - 6x - 5$ **26.** $y = x^2 + 4x + 7$ **27.** $y = x^2 - 8x + 12$

28. $y = -x^2 - 10x - 24$ **29.** $y = x^2 - 2x$ **30.** $y = -x^2 + 6x + 16$

31. $y = 2x^2 + 8x + 10$ **32.** $y = -3x^2 - 18x - 5$ **33.** $y = 6x^2 - 12x - 10$

34. $y = -2x^2 + 16x + 3$ **35.** $y = 5x^2 + 40x - 6$ **36.** $y = 4x^2 - 24x + 13$

37. ***Writing*** Suppose you examined a small piece of a parabola under a microscope. It would be nearly a straight line segment. Describe how the slope of such line segments would change as you made your way along the parabola.