

Practice 78

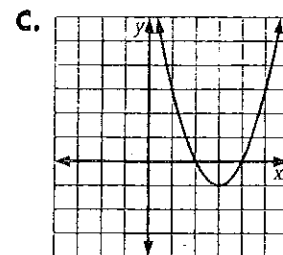
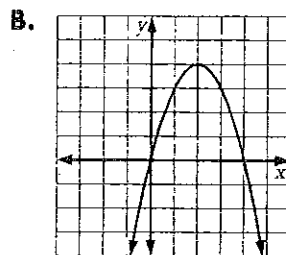
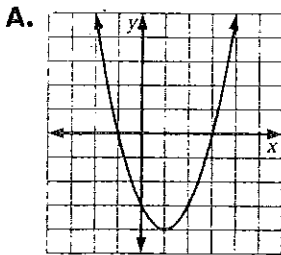
For use with Section 10-3

Match each equation with its graph.

1. $y = (x - 2)(x - 4)$

2. $y = (x - 3)(x + 1)$

3. $y = -x(x - 4)$



Graph each parabola.

4. $y = x(x - 4)$

5. $y = x(x + 2)$

6. $y = -x(x + 4)$

7. $y = (x - 1)(x + 1)$

8. $y = (x - 2)(2 - x)$

9. $y = (x - 1)(x + 3)$

10. $y = (x + 2)(4 - x)$

11. $y = (x - 1)(3 - x)$

12. $y = (2x - 6)(x + 1)$

Find the x -intercepts and y -intercept of the graph of each equation.

13. $y = x(x - 3)$

14. $y = -x(x + 7)$

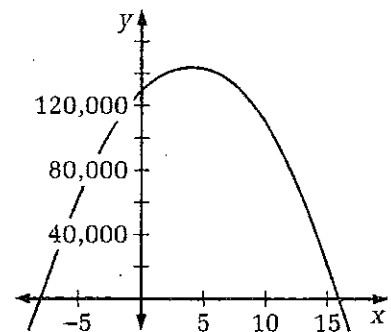
15. $y = (x - 1)(x - 6)$

16. $y = (x + 4)(x - 11)$

17. $y = (3x - 1)(x + 4)$

18. $y = (2 - x)(4x + 3)$

Dinah Johnson, an economist for a cable TV company, graphed the relationship between total monthly revenue (y) and proposed increase (x) in the monthly fee. The fee is now \$8.00 and revenue is \$128,000.



19. What are the x -intercepts and the y -intercept of the graph?

20. What fee increase will maximize revenue?

21. Which equation could represent the graph?

a. $y = (16,000 + 1000x)(8 + x)$

b. $y = (16,000 + 1000x)(8 - x)$

c. $y = (16,000 - 1000x)(8 + x)$

d. $y = (16,000 - 1000x)(8 - x)$

22. *Writing* The two factors in the answer for Exercise 21 represent proposed fee and audience size. Describe how one of these quantities affects the other.