

LESSON
9.5**Practice C**

For use with pages 582–589

Factor the trinomial.

1. $x^2 - x - 56$

2. $m^2 + 14m + 48$

3. $y^2 - 15y + 54$

4. $p^2 + 12p + 20$

5. $w^2 - 14w + 45$

6. $x^2 + 2x - 24$

Solve the equation.

7. $n^2 - 11n - 60 = 0$

8. $z^2 + 22z + 121 = 0$

9. $c^2 - 24c + 144 = 0$

10. $x^2 + 5x - 500 = 0$

11. $b^2 + b - 132 = 0$

12. $m^2 + 17m + 72 = 0$

13. $r^2 - 4r - 60 = 0$

14. $p^2 - 6p - 72 = 0$

15. $y^2 - 16y + 64 = 0$

Find the zeros of the polynomial function.

16. $f(x) = x^2 + 30x + 225$

17. $h(x) = x^2 - 5x - 150$

18. $g(x) = x^2 - 13x + 30$

19. $g(x) = x^2 - 10x - 600$

20. $f(x) = x^2 + 16x + 28$

21. $f(x) = x^2 + 13x + 40$

Solve the equation.

22. $x(x - 4) = 21$

23. $b(b + 2) = 24$

24. $n(n - 11) = -24$

25. $x^2 + 13(x + 2) = -10$

26. $x^2 - 10(x + 2) = 4$

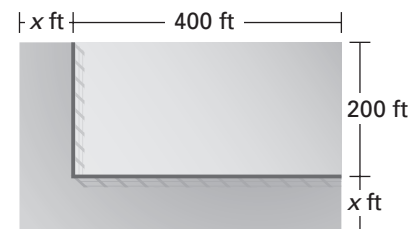
27. $y(y - 15) = -56$

28. $x^2 + 2\left(\frac{1}{2}x - 10\right) = 0$

29. $x(x + 17) = -42$

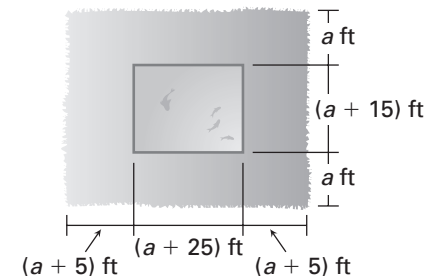
30. $c(c - 11) = -18$

- 31. Zoo Exhibit** A zoo is building a walkway along two sides of an exhibit. The exhibit is rectangular with a width of 400 feet and a length of 200 feet. The walkway will have the same width on each side of the exhibit.



- Write a polynomial that represents the combined area of the exhibit and the walkway.
- The combined area of the exhibit and walkway should be 95,625 square feet. How wide should the walkway be?
- If concrete costs \$15 per square foot, how much will it cost to pave the walkway?

- 32. Fish Pond** A rectangular fish pond is positioned in the center of a rectangular grassy area, as shown. The area of the pond is 2000 square feet.



- Use the dimensions given in the diagram to find the dimensions of the pond.
- The combined area of the pond and the surrounding grassy area is 9900 square feet. Find the length and width of the grassy area.