Name _____ Date _____

LESSON 8.5

Practice B

For use with the lesson "Factor $x^2 + bx + c$"

Factor the trinomial.

1. $x^2 + 8x + 7$

2. $b^2 - 7b + 10$

3. $w^2 - 12w - 13$

4. $p^2 + 10p + 25$

5. $m^2 - 10m + 24$

6. $y^2 - 5y - 24$

7. $a^2 + 13a + 36$

8. $n^2 + 2n - 48$

9. $z^2 - 14z + 40$

Solve the equation.

10. $y^2 + 17y + 72 = 0$

11. $a^2 - 9a - 36 = 0$

12. $w^2 - 13w + 42 = 0$

13. $m^2 - 5m - 14 = 0$

14. $x^2 + 11x + 24 = 0$

15. $n^2 - 12n + 27 = 0$

16. $d^2 + 5d - 50 = 0$

17. $p^2 + 16p + 48 = 0$

18. $z^2 - z - 30 = 0$

Find the zeros of the polynomial function.

19. $f(x) = x^2 - 5x - 36$

20. $g(x) = x^2 + 8x - 20$

21. $h(x) = x^2 - 11x + 24$

22. $f(x) = x^2 + 11x + 28$

23. $g(x) = x^2 + 11x - 12$

24. $h(x) = x^2 + 3x - 18$

Solve the equation.

25. $x(x + 17) = -60$

26. $p(p - 4) = 32$

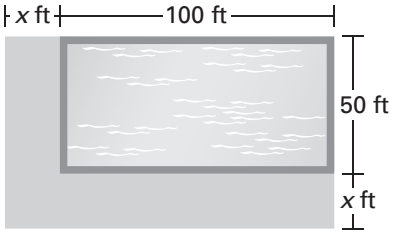
27. $w(w + 8) = -15$

28. $n(n + 6) = 7$

29. $s^2 - 3(s + 2) = 4$

30. $d^2 + 18(d + 4) = -9$

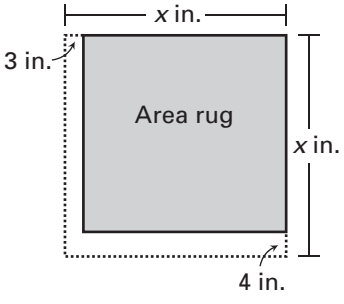
31. **Patio Area** A community center is building a patio area along two sides of its pool. The pool is rectangular with a width of 50 feet and a length of 100 feet. The patio area will have the same width on each side of the pool.



a. Write a polynomial that represents the combined area of the pool and the patio area.

b. The combined area of the pool and patio area should be 8400 square feet. How wide should the patio area be?

32. **Area Rug** You are creating your own area rug from a square piece of remnant carpeting. You plan on cutting 4 inches from the length and 3 inches from the width. The area of the resulting area rug is 1056 square inches.



a. Write a polynomial that represents the area of your area rug.

b. What is the perimeter of the original piece of remnant carpeting?