

**8-3 Practice****Quadratic Equations:  $x^2 + bx + c = 0$** 

Factor each polynomial.

1.  $a^2 + 10a + 24$

2.  $h^2 + 12h + 27$

3.  $x^2 + 14x + 33$

4.  $g^2 - 2g - 63$

5.  $w^2 + w - 56$

6.  $y^2 + 4y - 60$

7.  $b^2 + 4b - 32$

8.  $n^2 - 3n - 28$

9.  $t^2 + 4t - 45$

10.  $z^2 - 11z + 30$

11.  $d^2 - 16d + 63$

12.  $x^2 - 11x + 24$

13.  $q^2 - q - 56$

14.  $x^2 - 6x - 55$

15.  $32 + 18r + r^2$

16.  $48 - 16g + g^2$

17.  $j^2 - 9jk - 10k^2$

18.  $m^2 - mv - 56v^2$

Solve each equation. Check the solutions.

19.  $x^2 + 17x + 42 = 0$

20.  $p^2 + 5p - 84 = 0$

21.  $k^2 + 3k - 54 = 0$

22.  $b^2 - 12b - 64 = 0$

23.  $n^2 + 4n = 32$

24.  $h^2 - 17h = -60$

25.  $t^2 - 26t = 56$

26.  $z^2 - 14z = 72$

27.  $y^2 - 84 = 5y$

28.  $80 + a^2 = 18a$

29.  $u^2 = 16u + 36$

30.  $17r + r^2 = -52$

31. Find all values of  $k$  so that the trinomial  $x^2 + kx - 35$  can be factored using integers.32. **CONSTRUCTION** A construction company is planning to pour concrete for a driveway. The length of the driveway is 16 feet longer than its width  $w$ .

a. Write an expression for the area of the driveway.

b. Find the dimensions of the driveway if it has an area of 260 square feet.