

**8-6 Skills Practice****Solving  $x^2 + bx + c = 0$** **Factor each polynomial.**

1.  $t^2 + 8t + 12$

$(t + 2)(t + 6)$

2.  $n^2 + 7n + 12$

$(n + 3)(n + 4)$

3.  $p^2 + 9p + 20$

$(p + 5)(p + 4)$

4.  $h^2 + 9h + 18$

$(h + 6)(h + 3)$

5.  $n^2 + 3n - 18$

$(n + 6)(n - 3)$

6.  $x^2 + 2x - 8$

$(x + 4)(x - 2)$

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

$(y + 1)(y - 6)$

8.  $g^2 + 3g - 10$

$(g + 5)(g - 2)$

9.  $r^2 + 4r - 12$

$(r - 2)(r + 6)$

10.  $x^2 - x - 12$

$(x - 4)(x + 3)$

11.  $w^2 - w - 6$

$(w - 3)(w + 2)$

12.  $y^2 - 6y + 8$

$(y - 2)(y - 4)$

13.  $x^2 - 8x + 15$

$(x - 5)(x - 3)$

14.  $b^2 - 9b + 8$

$(b - 1)(b - 8)$

15.  $t^2 - 15t + 56$

$(t - 7)(t - 8)$

16.  $-4 - 3m + m^2$

$(m - 4)(m + 1)$

**Solve each equation. Check the solutions.**

17.  $x^2 - 6x + 8 = 0$  {2, 4}

18.  $b^2 - 7b + 12 = 0$  {3, 4}

19.  $m^2 + 5m + 6 = 0$  {-3, -2}

20.  $d^2 + 7d + 10 = 0$  {-5, -2}

21.  $y^2 - 2y - 24 = 0$  {-4, 6}

22.  $p^2 - 3p = 18$  {-3, 6}

23.  $h^2 + 2h = 35$  {-7, 5}

24.  $a^2 + 14a = -45$  {-9, -5}

25.  $n^2 - 36 = 5n$  {-4, 9}

26.  $w^2 + 30 = 11w$  {5, 6}