

8-5**Practice**

Form K

Factoring $x^2 + bx + c$ **Complete.**

1. $n^2 + 9n + 18 = (n + 3)(n + \boxed{6})$

2. $t^2 + 9t + 14 = (t + 2)(t + \boxed{7})$

3. $d^2 + 11d + 30 = (d + 5)(d + \boxed{6})$

4. $v^2 + 2v + 1 = (v + 1)(v + \boxed{1})$

5. $m^2 - 8m + 15 = (m - 5)(m - \boxed{3})$

6. $a^2 - 13a + 22 = (a - 2)(a - \boxed{11})$

7. $z^2 - 17z + 72 = (z - 8)(z - \boxed{9})$

8. $w^2 - 7w + 12 = (w - 3)(w - \boxed{4})$

Factor each expression. Check your answer.

9. $g^2 + 6g + 8$
 $(g + 2)(g + 4)$

10. $y^2 + 10y + 24$
 $(y + 6)(y + 4)$

11. $r^2 + 12r + 35$
 $(r + 5)(r + 7)$

12. $k^2 + 9k + 8$
 $(k + 1)(k + 8)$

13. $x^2 - 16x + 60$
 $(x - 10)(x - 6)$

14. $h^2 - 19h + 78$
 $(h - 13)(h - 6)$

Complete.

15. $g^2 + 5g - 24 = (g - 3)(g + \boxed{8})$

16. $b^2 - 6b - 7 = (b - 7)(b + \boxed{1})$

17. $y^2 + 4y - 45 = (y + 9)(y - \boxed{5})$

18. $k^2 + 4k - 12 = (k + 6)(k - \boxed{2})$

19. $p^2 - 7p - 60 = (p + 5)(p - \boxed{12})$

20. $n^2 - 6n - 40 = (n - 10)(n + \boxed{4})$

8-5**Practice** (continued)

Form K

Factoring $x^2 + bx + c$

Factor each expression. Check your answer.

21. $x^2 - 4x - 5$
 $(x + 1)(x - 5)$

22. $t^2 + t - 20$
 $(t + 5)(t - 4)$

23. $z^2 - z - 72$
 $(z + 8)(z - 9)$

24. $m^2 - 6m - 27$
 $(m + 3)(m - 9)$

25. $a^2 + 4a - 21$
 $(a + 7)(a - 3)$

26. $v^2 - 4v - 12$
 $(v + 2)(v - 6)$

27. $c^2 - 7c - 44$
 $(c + 4)(c - 11)$

28. $r^2 + 6r - 16$
 $(r + 8)(r - 2)$

29. $f^2 + f - 6$
 $(f + 3)(f - 2)$

30. $j^2 - 6j - 55$
 $(j + 5)(j - 11)$

31. $y^2 + 3y - 54$
 $(y + 9)(y - 6)$

32. $n^2 - 10n - 11$
 $(n + 1)(n - 11)$

33. The area of a rectangular window is given by the trinomial $x^2 - 14x + 48$. The window's length is $(x - 8)$. What is the window's width? $(x - 6)$ 34. The area of a rectangular area rug is given by the trinomial $f^2 - 4f - 77$. The length of the rug is $(f + 7)$. What is the width of the rug? $(f - 11)$ 35. **Reasoning** Write possible expressions for the length and the width of a rectangle with area $x^2 + 13x + 42$. $(x + 6)$; $(x + 7)$ 36. A rectangular tabletop has an area of $t^2 + 2t - 99$. What are possible dimensions of the tabletop? Use factoring. $t + 11$ and $t - 9$