

**Practice***Form K*Factoring  $ax^2 + bx + c$ **Factor each expression.**

1.  $3n^2 - 8n - 3$

2.  $5a^2 - 22a + 8$

3.  $2s^2 + 13s + 6$

4.  $6t^2 + 21t - 12$

5.  $9b^2 - 65b + 14$

6.  $5z^2 + 11z + 6$

7.  $7r^2 - 9r - 10$

8.  $2m^2 + m - 21$

9.  $3g^2 + 20g + 32$

10. The area of a rectangular driveway is  $2x^2 + 15x + 25$ . The width of the driveway is  $x + 5$ . What is the length of the driveway?

11. The area of a rectangular floor is  $8x^2 + 6x - 20$ . The width of the floor is  $2x + 4$ . What is the length of the floor?

12. The area of a rectangular desktop is  $6x^2 - 3x - 3$ . The width of the desktop is  $2x + 1$ . What is the length of the desktop?

**Factor each expression completely.**

13.  $24n^2 + 2n - 12$

14.  $72q^2 - 12q - 40$

15.  $30j^2 - 27j - 21$

16.  $60h^2 + 280h + 45$

17.  $40a^2 + 126a + 44$

18.  $45f^2 + 24f - 189$

**Practice** (continued)

Form K

Factoring  $ax^2 + bx + c$ 

**Open-Ended** Find two different values that complete each expression so that the trinomial can be factored into the product of two binomials. Factor your trinomials.

19.  $4n^2 + \boxed{\phantom{00}}n - 3$

20.  $12r^2 + \boxed{\phantom{00}} + 6$

21.  $24a^2 + \boxed{\phantom{00}}a - 15$

22.  $18b^2 + \boxed{\phantom{00}}b + 8$

23. A parallelogram has an area of  $8x^2 - 2x - 45$ . The height of the parallelogram is  $4x + 9$ .

a. Write the formula for the area of a parallelogram.

b. What is the length of the base of the parallelogram?

c. **Writing** Explain how you solved the problem.

24. A rectangular athletic field has an area of  $40x^2 + 190x - 50$ . The width of the athletic field is  $8x - 2$ . What is the length of the athletic field?

**Factor each expression.**

25.  $96d^2 - 76d - 77$

26.  $48h^2 - 86h + 35$

27.  $24m^2 + 18m - 15$

28.  $36c^2 + 27c - 55$