LESSON 10.6

NAME _____ DATE _____

Practice C

For use with pages 611–617

Choose the correct factorization. If neither is correct, find the correct factorization.

1. $6x^2 + 5x - 4$

A. $(3x + 4)(2x - 1)$

B. $(3x - 4)(2x + 1)$

2. $6x^2 - 13x - 5$

A. $(6x - 6)(x + 1)$

B. $(6x + 6)(x - 1)$

3 $12x^2 + 7x - 12$

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

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

Factor the trinomial if possible. If it cannot be factored, write *not factorable.*

4. $2x^2 - x - 21$

5. $3x^2 + 9x - 7$

6. $9x^2 + 6x + 1$

7. $3x^2 + 11x + 10$

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

9. $3x^2 + x - 1$

10. $14x^2 - 19x - 40$

11. $4x^2 - 3x + 7$

12. $6x^2 - 36x + 54$

Solve the equation by factoring.

13. $2x^2 + 7x + 3 = 0$

14. $3x^2 + 14x - 5 = 0$

15. $3x^2 + 11x - 4 = 0$

16. $6x^2 + 13x + 5 = 0$

17. $3x^2 + 7x = -2$

18. $12x^2 = 5x + 3$

19. $10x^2 + 5 = -15x$

20. $12x^2 + 32x = -5$

21. $140x^2 + 300x = -40x - 120$

Solve the equation by factoring, by square roots, or by using the quadratic formula.

22. $4x^2 - 9 = 0$

23. $x^2 + 6x = 0$

24. $x^2 - 4x + 1 = 0$

25. $x^2 + 21 = 10x$

26. $2x^2 + 12x + 10 = -8$

27. $12x^2 + x - 1 = 0$

28. $2x^2 + 3x + 5 = 8$

29. $4x^2 - 64 = 0$

30. $18x^2 - 27x = 35$

Vertical Motion **In Exercises 31 and 32, use vertical motion model $h = -16t^2 + vt + s$, where h is the height (in feet), t is the time in motion (in seconds), v is the initial velocity (in feet per second), and s is the initial height (in feet). Solve by factoring.**

31. A baseball player releases a baseball at a height of 6 feet with an initial velocity of 46 feet per second. Find the time (in seconds) for the ball to reach the ground.

32. A miniature rocket is launched off a roof 25 feet above the ground with an initial velocity of 30 feet per second. How much time will elapse before the rocket reaches the ground?