Name _____ Class _____ Date _____

Practice 9–6

Completing the Square

Find the value of *n* such that each expression is a perfect square trinomial.

1. $x^2 - 14x + n$

2. $x^2 - \frac{2}{9}x + n$

3. $x^2 - \frac{4}{9}x + n$

4. $x^2 - \frac{2}{6}x + n$

Solve each equation by completing the square. If necessary, round to the nearest hundredth.

5. $x^2 - 4x = 5$

6. $x^2 - x - 2 = 0$

7. $x^2 - 6x = 10$

8. $x^2 + 4x + 4 = 0$

9. $x^2 - 3x = 18$

10. $x^2 - 8x - 4 = 0$

11. $x^2 - 6x = 0$

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

13. $x^2 - 7x = 0$

14. $x^2 + 4x - 12 = 0$

15. $x^2 + 11x + 10 = 0$

16. $x^2 + 2x = 15$

17. $x^2 - 8x = 9$

18. $x^2 + 5x = -6$

19. $x^2 - 2x = 120$

20. $x^2 - 22x = -105$

21. $2x^2 = 3x + 9$

22. $2x^2 + 8x - 10 = 0$

23. $2x^2 - 3x - 2 = 0$

24. $2x^2 + 12x - 32 = 0$

25. $3x^2 + 17x - 6 = 0$

26. $2x^2 - x - 28 = 0$

27. $3x^2 - 4x + 1 = 0$

28. $2x^2 - 5x - 3 = 0$

29. $6x^2 - 2x = 28$

30. $2x^2 - 16x = -30$

31. $4x^2 = -2x + 12$

32. $9x^2 + 6x = 3$

33. $10x^2 + 3x = 4$

34. $12x^2 - 29x + 15 = 0$

What term do you need to add to each side to complete the square?

35. $x^2 + 4x = 10$

36. $2x^2 + 4x = 8$

37. $3x^2 + 9x = 6$

38. $2x^2 + 5x = 7$

39. $5b^2 + 7b = 10$

40. $3y + 8y = 4$