

Additional Practice Solving Quadratics by Factoring and Taking Square Roots

Complete all problems in your notebook, showing all work.

In 1–12, solve the equation.

1. $x^2 = 49$

2. $x^2 = 64$

3. $3x^2 = 300$

4. $8x^2 = 128$

5. $\frac{1}{3}x^2 = 3$

6. $\frac{1}{4}x^2 = 9$

7. $25x^2 = 4$

8. $x^2 + 11 = 12$

9. $x^2 - 56 = 25$

10. $3x^2 + 10 = 37$

11. $\frac{1}{2}x^2 - 16 = 34$

12. $4x^2 - 59 = 62$

In 13–24, use a calculator to solve the equation. Round the results to two decimal places.

13. $x^2 = 35$

14. $x^2 = 12$

15. $x^2 + 8 = 13$

16. $x^2 - 5 = 21$

17. $x^2 + 20 = 37$

18. $x^2 - 10 = -3$

19. $3x^2 - 31 = 2$

20. $\frac{3}{5}x^2 - 8 = 26$

21. $4x^2 + 8 = 19$

22. $\frac{1}{2}x^2 + 6 = 9$

23. $2x^2 - 22 = 51$

24. $\frac{1}{3}x^2 - 11 = 13$

(Back)

In 1–12, solve the equation by factoring.

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

2. $x^2 - 8x + 15 = 0$

3. $3x^2 + 9x - 12 = 0$

4. $6x^2 - 10x - 4 = 0$

5. $6x^2 - 27x + 27 = 0$

6. $3x^2 + 5x + 2 = 0$

7. $8x^2 + 10x + 3 = 0$

8. $4x^2 - 8x - 5 = 0$

9. $12x^2 - 5x - 3 = 0$

10. $15x^2 + 16x - 15 = 0$

11. $8x^2 - 22x + 5 = 0$

12. $6x^2 + 5x + 1 = 0$

In 13–24, solve the equation by finding square roots,
or by factoring.

13. $4x^2 - 9 = 0$

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

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

19. $2x^2 = 16x$

20. $2x^2 + 12x + 10 = -8$

21. $2x^2 - x = 6$

22. $12x^2 + x - 1 = 0$

23. $2x^2 + 7x = 4$