

LESSON
9.4**Practice C**

For use with the lesson "Use Square Roots to Solve Quadratic Equations"

Solve the equation.

1. $4x^2 - 29 = 7$

2. $2x^2 - 50 = 48$

3. $5x^2 - 120 = -40$

4. $\frac{1}{2}x^2 - 2 = 0$

5. $\frac{1}{3}x^2 - 8 = 4$

6. $0.1x^2 - 6.4 = 0$

Solve the equation. Round the solutions to the nearest hundredth.

7. $4x^2 - 8 = 12$

8. $7x^2 - 43 = 34$

9. $2x^2 + 7 = 1$

10. $3x^2 + 23 = 74$

11. $6x^2 - 27 = 9$

12. $5(x - 8)^2 = 15$

13. $4(x + 9)^2 = 24$

14. $\frac{1}{2}(x - 4)^2 = 7$

15. $\frac{3}{4}(x + 7)^2 = 9$

16. $\frac{2}{5}(x - 4)^2 = 16$

17. $7x^2 - 34 = 2x^2 + 16$

18. $24 = 3(x^2 + 7)$

19. $9x^2 + 3 = 4(3x^2 - 6)$

20. $\left(\frac{x-4}{5}\right)^2 = 36$

21. $(16x^2 - 8)^2 = 81$

Solve the equation without graphing.

22. $x^2 + 6x + 9 = 16$

23. $x^2 - 4x + 4 = 100$

24. $x^2 - 10x + 25 = 121$

25. $2x^2 - 28x + 98 = 72$

26. $-3x^2 + 6x - 3 = -27$

27. $\frac{1}{2}x^2 + 4x + 8 = 8$

- 28. Plant Food** A manufacturer is making a cylindrical canister that will hold granulated plant food. The manufacturer wants the canister to have a volume of 2036 cubic centimeters and be 18 centimeters tall. What should the diameter of the canister be? (*Hint:* Use the formula for volume, $V = \pi r^2 h$, where V is the volume, r is the radius, and h is the height.) Round your answer to the nearest centimeter.



18 cm

- 29. Speed** To estimate the speed s (in feet per second) of a car involved in an accident, investigators use the formula $s = \frac{11}{2}\sqrt{\frac{3}{4}l}$ where l represents the length (in feet) of tire skid marks on the pavement. After an accident, an investigator measures skid marks that are 180 feet long. Approximately how fast was the car traveling?