

LESSON
4.5**Practice B**

For use with pages 266–271

Simplify the expression.

1. $\sqrt{242}$

4. $5\sqrt{24} \cdot 2\sqrt{28}$

7. $\sqrt{\frac{121}{225}}$

10. $\frac{3}{4 + \sqrt{5}}$

2. $\sqrt{153}$

5. $\sqrt{8} \cdot 3\sqrt{40} \cdot \sqrt{3}$

8. $\sqrt{\frac{7}{9}} \cdot \sqrt{\frac{4}{7}}$

11. $\frac{-6}{5 - \sqrt{11}}$

3. $\sqrt{56}$

6. $\sqrt{10} \cdot \sqrt{14}$

9. $\sqrt{24} \cdot \sqrt{\frac{80}{192}}$

12. $\frac{7 - \sqrt{7}}{10 + \sqrt{3}}$

Solve the equation.

13. $x^2 = 289$

16. $3x^2 - 150 = 282$

19. $2x^2 + 5 = 5x^2 - 37$

22. $2(x + 2)^2 = 72$

25. $(4x - 5)^2 = 64$

14. $x^2 - 169 = 0$

17. $\frac{1}{2}x^2 - 8 = 16$

20. $4(x^2 - 8) = 84$

23. $3(x - 3)^2 + 2 = 26$

26. $\frac{1}{2}(x - 4)^2 = 8$

15. $2x^2 - 512 = 0$

18. $\frac{2}{3}x^2 - 4 = 12$

21. $3(x^2 + 2) = 18$

24. $(3x + 2)^2 - 49 = 0$

27. $\frac{2}{3}(x + 8)^2 - 66 = 0$

When an object is dropped, its height h can be determined after t seconds by using the falling object model $h = -16t^2 + s$ where s is the initial height. Find the time it takes an object to hit the ground when it is dropped from a height of s feet.

28. $s = 160$

30. $s = 550$

32. $s = 900$

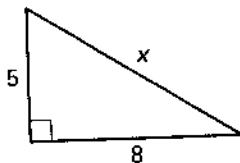
29. $s = 300$

31. $s = 690$

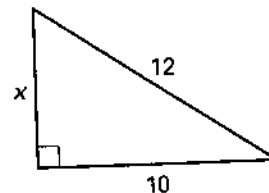
33. $s = 1600$

Use the Pythagorean theorem to find x . Round to the nearest hundredth.

34.



35.



36. **Operating Costs** For a period of 48 months, the average monthly operating cost for a small business C (in dollars) can be approximated by the model $C = 0.55t^2 + 550$ where t is the number of months. During which month was the average operating cost \$1430?