

LESSON
11.2**Practice A***For use with pages 718–726***Match the radical with the simplified expression.**

1. $\sqrt{150}$

2. $\sqrt{90}$

3. $\sqrt{60}$

A. $3\sqrt{10}$

B. $2\sqrt{15}$

C. $5\sqrt{6}$

Simplify the expression.

4. $\sqrt{99}$

5. $\sqrt{28}$

6. $\sqrt{54}$

7. $\sqrt{50}$

8. $\sqrt{27a}$

9. $\sqrt{16x^2}$

10. $\sqrt{100n^3}$

11. $\sqrt{125p^3}$

12. $\sqrt{3} \cdot \sqrt{15}$

Name the value of 1 that you would multiply the radical expression by to rationalize the denominator.

13. $\frac{1}{\sqrt{23}}$

14. $\frac{3}{\sqrt{10}}$

15. $\frac{1}{\sqrt{5x}}$

Simplify the expression by rationalizing the denominator.

16. $\frac{1}{\sqrt{5}}$

17. $\frac{1}{\sqrt{17}}$

18. $\frac{7}{\sqrt{3}}$

Simplify the expression.

19. $3\sqrt{5} + 4\sqrt{5}$

20. $10\sqrt{2} - 3\sqrt{2}$

21. $\sqrt{7} - 4\sqrt{7}$

22. $4\sqrt{18} + \sqrt{18}$

23. $5\sqrt{8} - 4\sqrt{8}$

24. $\sqrt{12} + 3\sqrt{3}$

25. $\sqrt{2}(1 + \sqrt{2})$

26. $\sqrt{3}(\sqrt{3} - 2)$

27. $\sqrt{3}(1 + \sqrt{12})$

28. Electricity The voltage V (in volts) required for a circuit is given by $V = \sqrt{PR}$ where P is the power (in watts) and R is the resistance (in ohms). Find the volts needed to light a 60-watt light bulb with a resistance of 110 ohms. Round your answer to the nearest tenth.

29. Drum Heads The radius r (in inches) of a circle with an area A (in square inches)

is given by the function $r = \sqrt{\frac{A}{\pi}}$.

a. The drum head on a conga drum has an area of 16π square inches. Find the diameter of the drum head.

b. The drum head on a bongo has an area of 9π square inches. Find the diameter of the drum head.