

LESSON
11.2**Practice C**

For use with pages 718–726

Simplify the expression.

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|------------------------------------|-------------------------------|----------------------------------|
| 1. $\sqrt{45s^3}$ | 2. $\sqrt{196r^4}$ | 3. $\sqrt{450c^5}$ |
| 4. $\sqrt{124m^4n^{10}}$ | 5. $11\sqrt{x^7y^8}$ | 6. $\sqrt{a^3b} \cdot \sqrt{ab}$ |
| 7. $\sqrt{27xy} \cdot \sqrt{5y^3}$ | 8. $\sqrt{\frac{121}{16m^2}}$ | 9. $\sqrt{\frac{5d^2}{125}}$ |

Simplify the expression by rationalizing the denominator.

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|--------------------------|------------------------------|-------------------------------|
| 10. $\sqrt{\frac{5}{8}}$ | 11. $\sqrt{\frac{7m^5}{11}}$ | 12. $\sqrt{\frac{125}{4x^3}}$ |
|--------------------------|------------------------------|-------------------------------|

Simplify the expression.

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|--|---|--|
| 13. $\sqrt{15} + 5\sqrt{3} - 2\sqrt{27}$ | 14. $\sqrt{7}(3 - 2\sqrt{7})$ | 15. $\sqrt{2}(3\sqrt{14} - \sqrt{7})$ |
| 16. $(3\sqrt{12} + 5)^2$ | 17. $(8\sqrt{3} + \sqrt{2})(1 - \sqrt{3})$ | 18. $\sqrt{\frac{250m^3}{2n}}$ |
| 19. $\frac{5}{\sqrt{7}} + \frac{2}{\sqrt{14}}$ | 20. $\frac{4\sqrt{10}}{\sqrt{30}} - \frac{2}{\sqrt{3}}$ | 21. $\frac{4}{\sqrt{x}} + \frac{5}{2\sqrt{x}}$ |

22. **Electricity** Current, power, and resistance are related by the formula $I = \sqrt{\frac{P}{R}}$

where I is the current (in amps), P is the power (in watts), and R is the resistance (in ohms).

- A light bulb with a 283-ohm resistor is using 0.42 amp of current. What is the wattage of the light bulb? Round your answer to the nearest whole watt.
- A light bulb with a 145-ohm resistor is using 0.83 amp of current. What is the wattage of the light bulb? Round your answer to the nearest whole watt.

23. **Medicine** A doctor may need to know a person's body surface area to prescribe the correct amount of medicine. A person's body surface area A (in square meters) is given by the function

$$A = \sqrt{\frac{hw}{3131}}$$

where h is the height (in inches) and w is the weight (in pounds).

- Find the body surface area of a person who is 5 feet 5 inches tall and weighs 110 pounds. Round your answer to the nearest tenth of a meter.
- Find the body surface area of a person who is 5 feet 10 inches tall and weighs 120 pounds. Round your answer to the nearest tenth of a meter.