

Practice A

For use with pages 511–516

Match the radical expression with its simplified form.

A. $6\sqrt{2}$

B. $4\sqrt{5}$

C. $4\sqrt{2}$

D. $5\sqrt{3}$

E. $2\sqrt{7}$

F. $8\sqrt{2}$

G. $3\sqrt{3}$

H. $7\sqrt{2}$

1. $\sqrt{128}$

2. $\sqrt{80}$

3. $\sqrt{98}$

4. $\sqrt{72}$

5. $\sqrt{27}$

6. $\sqrt{32}$

7. $\sqrt{75}$

8. $\sqrt{28}$

Use the product property to simplify the expression.

9. $\sqrt{20}$

10. $\sqrt{12}$

11. $\sqrt{40}$

12. $\sqrt{18}$

13. $\sqrt{48}$

14. $\sqrt{54}$

15. $\sqrt{45}$

16. $\sqrt{3} \cdot \sqrt{4}$

Use the quotient property to simplify the expression.

17. $\sqrt{\frac{3}{4}}$

18. $\sqrt{\frac{9}{16}}$

19. $\sqrt{\frac{3}{25}}$

20. $\sqrt{\frac{20}{49}}$

21. $3\sqrt{\frac{6}{3}}$

22. $2\sqrt{\frac{7}{9}}$

23. $5\sqrt{\frac{13}{25}}$

24. $10\sqrt{\frac{11}{36}}$

Simplify the expression.

25. $\frac{\sqrt{64}}{\sqrt{36}}$

26. $\frac{\sqrt{80}}{\sqrt{4}}$

27. $\frac{\sqrt{18}}{\sqrt{81}}$

28. $\frac{\sqrt{75}}{\sqrt{25}}$

29. $\frac{\sqrt{40}}{\sqrt{16}}$

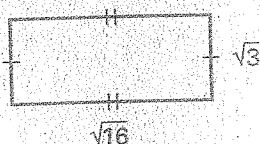
30. $\frac{\sqrt{100}}{\sqrt{25}}$

31. $\sqrt{20} \cdot \sqrt{80}$

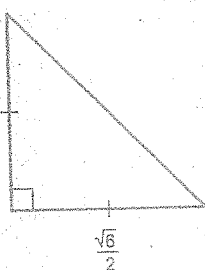
32. $3\sqrt{12} \cdot \sqrt{3}$

Geometry Find the area of the figure. Give both the exact answer in simplified form and the decimal approximation rounded to the nearest hundredth.

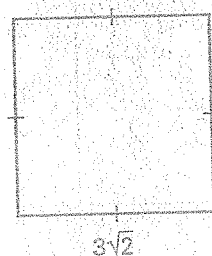
33.



34.



35.



36. **Boat Racing** The maximum speed s (in knots or nautical miles per hour) that some kinds of boats can travel can be modeled by $s^2 = \frac{16}{9}x$, where x is the length of the water line in feet. Find the maximum speed of a sailboat with a 30-foot water line.