

Practice 17

For use with Section 2-9

Find the square roots of each number.

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|-----------|-------------------|-----------|-------------------|
| 1. 49 | 2. $\frac{1}{64}$ | 3. 1.69 | 4. $\frac{4}{81}$ |
| 5. 0.0036 | 6. 2500 | 7. 0.0121 | 8. 90,000 |

Find the cube root of each number.

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| 9. 27 | 10. $\frac{1}{1000}$ | 11. $\frac{8}{125}$ | 12. 0.008 |
| 13. 0.027 | 14. 64,000 | 15. 0.125 | 16. 0.216 |

Tell whether each number is rational or irrational.

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| 17. 23.6 | 18. $\frac{3}{7}$ | 19. $\sqrt{10}$ | 20. $1.6\bar{3}$ |
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Estimate each square root within a range of two integers. Then use a calculator to find each square root to the nearest hundredth.

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| 21. $\sqrt{30}$ | 22. $\sqrt{12}$ | 23. $\sqrt{106}$ | 24. $\sqrt{0.5}$ |
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Estimate each cube root within a range of two integers. Then use a calculator to find each cube root.

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| 25. $\sqrt[3]{15}$ | 26. $\sqrt[3]{35}$ | 27. $\sqrt[3]{5}$ | 28. $\sqrt[3]{1020}$ |
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29. The current I (in amps) drawn by an appliance is given by the formula $I = \sqrt{\frac{P}{R}}$, where P is the power rating of the appliance (in watts) and R is its resistance (in ohms). What current is drawn by a 1500-watt toaster-oven with a resistance of 9.6 ohms?
30. The approximate time T (in seconds) for a pendulum L meters long to make a full swing is given by the formula $T = 6.3\sqrt{\frac{L}{10}}$. How many seconds will it take a pendulum 2 meters long to make a full swing?
31. **Open-ended** Convert several fractions to decimals on your calculator. First try fractions with small denominators, like 3, 7, 9, and 11. Then try fractions with larger denominators. Are all the numbers that you are using rational? Can you always tell from the calculator's display that the decimals are repeating? Explain.