

Name: _____



PRACTICE



TUTORIAL

1-5 Additional Practice

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Leveled Practice In 1 and 2, solve.

1. $y^2 = 169$

$$\sqrt{\square} = \pm \sqrt{\square}$$

$$z = \pm \square$$

The solutions are \square and \square .

2. $b^3 = 1,000$

$$\sqrt[3]{\square} = \sqrt[3]{\square}$$

$$b = \square$$

3. The volume of a cube shaped crate is 27 cubic feet. What is the length of one edge of the crate?

4. The area of a square patio is 196 square feet. How long is each side of the patio?

5. Solve the equation $c^2 = 4$.

6. Solve the equation $x^2 = 80$.

7. Solve the equation $r^3 = 216$.

8. Solve the equation $v^3 = 36$.

9. Jasmine is a structural engineer. She designs the lift hill of a roller coaster that models the equation $y = x^3$, where y is the height and x is the length from the start of the lift hill. Using this model, how far from the start of the lift hill does the ride reach a height of 343 meters?

10. **Higher Order Thinking** Holly wants to make a frame for a painting. The painting is square and has an area of 225 square inches.

a. Write an equation to represent the area of the painting, using s for side length. Then, solve the equation for s .

b. The framing material costs \$1.35 per inch. How much will she spend?



Assessment Practice

11. On a recent homework assignment, Eli needed to solve the equation $g^2 = 49$. He incorrectly wrote $g = -7$.

PART A

What is the correct solution?

PART B

Critique Reasoning What error did Eli likely make?

- Ⓐ He did not take the square root of 49 correctly since $(-7)^2 \neq 49$.
- Ⓑ He did not solve the equation completely since there is a positive solution as well.
- Ⓒ He did not solve the equation completely since there are two positive solutions.
- Ⓓ He did not solve the equation completely since there are two negative solutions.

12. The zoo is building a new tank for some of its fish. The tank will be a cube able to hold 3,375 cubic feet of water.

PART A

Which equation could you use to find the length of each side of the tank?

- Ⓐ $3V = 3,375$
- Ⓑ $\frac{3,375}{3} = s$
- Ⓒ $V^3 = 3,375$
- Ⓓ $3,375 = s^3$

PART B

How long is each side of the tank?