Name: _____

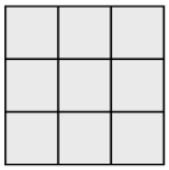
PRACTICE TUTORIAL

1-4 Additional Practice

Scan for Multimedia

Leveled Practice **In 1 and 2, evaluate the square root or cube root.**

1. Relate the area of the square to the length of each side.



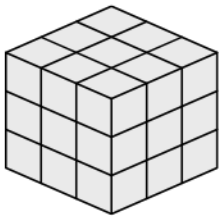
$A = 9 \text{ cm}^2$

Side length Side length

$\square$ cm $\times$ $\square$ cm

$\sqrt{9} = \square$

2. Relate the volume of the cube to the length of each edge.



$V = 27 \text{ in.}^3$

Edge length Edge length Edge length

$\square$ in. $\times$ $\square$ in. $\times$ $\square$ in.

$\sqrt[3]{27} = \square$

3. Ms. Lu is adding a new room to her house. The room will be a cube with volume 4,913 cubic feet. What is the length of the new room?

4. The volume of a box for earrings is 216 cubic centimeters. What is the length of one edge of the box?

5. The area of a square garage is 121 square feet. Will it fit a car that measures 13 feet long? Explain.

6. Nadia wants to enclose a square garden with fencing. It has an area of 141 square feet. To the nearest foot, how much fencing will she need? Explain.

7. Benjamin rents a storage unit that is shaped like a cube. There are 12 identical storage units in each row of the facility. If each storage unit has a volume of 125 cubic feet, what is the length of each row in the facility?

8. Would you classify the number 55 as a perfect square, as a perfect cube, both, or neither? Explain.

9. **Critique Reasoning** Clara says that if you square the number 4 and then divide the result by 2, you end up with 4. Is Clara correct? Explain.

10. **Higher Order Thinking** A fish tank at an aquarium has a volume of 1,568 cubic feet and a depth of 8 feet. If the base of the tank is square, what is the length of each side of the tank?

Assessment Practice

11. Which expression has the least value?

Ⓐ $\sqrt{81} \cdot 2$

Ⓑ $\sqrt{81} - \sqrt{25}$

Ⓒ $\sqrt{64} + \sqrt{25}$

Ⓓ $\sqrt{64} - 3$

12. On a math test, Ana writes 9 as the solution to $\sqrt[3]{27}$.

PART A

Find the correct solution.

PART B

What error did Ana likely make on the test?

Ⓐ Ana cubed 27.

Ⓑ Ana divided 27 by 3.

Ⓒ Ana multiplied 27 by 3.

Ⓓ Ana cubed 3.