

Lesson 6 Practice Problems

1. Select all solutions to the equation $x^2 = 7$.

A. $\sqrt{7}$

B. $-\sqrt{7}$

C. 49

D. -49

2. Find the solution(s) to each equation, if there are any.

a. $x^2 = 9$

b. $\sqrt{x} = 3$

c. $\sqrt{x} = -3$

3. a. If c is a positive number, how many solutions does $x^2 = c$ have? Explain.

b. If c is a positive number, how many solutions does $\sqrt{x} = c$ have? Explain.

4. Suppose that a friend missed class and never learned what $37^{\frac{1}{3}}$ means.

a. Use exponent rules your friend would already know to calculate $(37^{\frac{1}{3}})^3$.

b. Explain why this means that $37^{\frac{1}{3}}$ is the cube root of 37.

(From Unit 3, Lesson 3.)

5. Evaluate $8^{\frac{5}{3}}$.

6. Write each expression without using exponents.

a. $5^{\frac{2}{3}}$

b. $4^{-\frac{3}{2}}$

(From Unit 3, Lesson 5.)