

Lesson 8 Practice Problems

1. Select all equations for which -3 is a solution.

A. $x^2 = 9$

B. $x^2 = -9$

C. $x^3 = 27$

D. $x^3 = -27$

E. $-x^2 = 9$

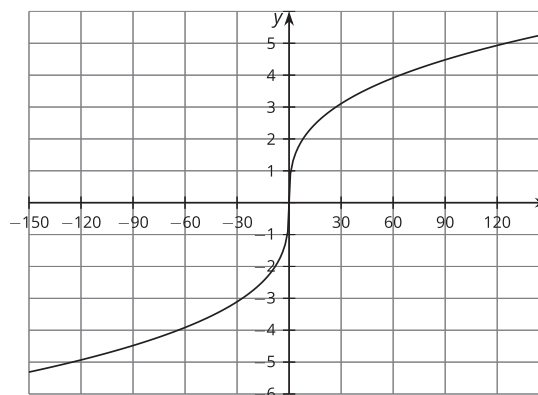
F. $(-x)^2 = 9$

2. a. Use the graph of $y = \sqrt[3]{x}$ to estimate the solution(s) to the following equations.

i. $\sqrt[3]{x} = 2$

ii. $\sqrt[3]{x} = -4.5$

iii. $\sqrt[3]{x} = 3.75$



b. Use the meaning of cube roots to find exact solutions to all three equations.

3. Which are the solutions to the equation $x^3 = -125$?

A. 5

B. -5

C. both 5 and -5

D. The equation has no solutions.

4. Complete the table. Use powers of 16 in the top row. Use radicals or rational numbers in the second row.

	$16^{-\frac{3}{4}}$		$16^{-\frac{1}{4}}$	
$\frac{1}{16}$		$\frac{1}{4}$		1

(From Unit 3, Lesson 5.)

5. Which are the solutions to the equation $\sqrt{x} = -8$?

- A. 64 only
- B. -64 only
- C. 64 and -64
- D. This equation has no solutions.

(From Unit 3, Lesson 6.)

6. Find the solution(s) to each equation, or explain why there is no solution.

a. $x^2 + 6 = 55$

b. $x^2 + 16 = 0$

c. $x^2 - 3.25 = 21.75$

(From Unit 3, Lesson 7.)