

Lesson 10 Practice Problems

1. Select all the true statements.

A. $\sqrt{-1}$ is an imaginary number.

B. There are no real numbers that satisfy the equation $x = \sqrt{-1}$.

C. Because $\sqrt{-1}$ is imaginary, no one does math with it.

D. The equation $x^2 = -1$ has real solutions.

E. $\sqrt{-1} = -1$ because $-1 \cdot -1 = -1$.

2. Plot each number on the real number line, or explain why the number is not on the real number line.

a. $\sqrt{4}$

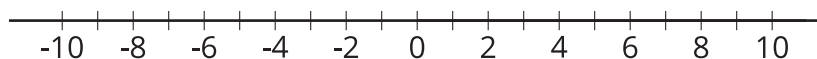
b. $-\sqrt{4}$

c. $\sqrt{-4}$

d. $\sqrt{8}$

e. $-\sqrt{8}$

f. $\sqrt{-8}$



3. Explain why $(x - 4)^2 = -9$ has no real solutions.

4. Which value is closest to $10^{-\frac{1}{2}}$?

- A. -5
- B. $\frac{1}{5}$
- C. $\frac{1}{3}$
- D. 3

(From Unit 3, Lesson 5.)

5. Which is a solution to the equation $\sqrt{6-x} + 5 = 10$?

- A. -19
- B. 19
- C. 21
- D. The equation has no solutions.

(From Unit 3, Lesson 7.)

6. Select **all** equations for which -64 is a solution.

- A. $\sqrt{x} = 8$
- B. $\sqrt{x} = -8$
- C. $\sqrt[3]{x} = 4$
- D. $\sqrt[3]{x} = -4$
- E. $-\sqrt{x} = 8$
- F. $\sqrt{-x} = 8$

(From Unit 3, Lesson 8.)