

Date Completed: _____

Mentor Initials: _____

A mentor can change everything.



Solving Rational and Radical Equations

Multiple Choice

1. If $\sqrt{x} = 7$, what is the value of x ?

- A) -49
- B) 14
- C) 49
- D) 343

2. If $\frac{15}{x} = 5$, what is the value of x ?

- A) 2
- B) 3
- C) 10
- D) 75

3. $\sqrt{x} = -9$

Which of the following values of x satisfies the given equation?

- A) -3
- B) 3
- C) 81
- D) None of the above

4. $9\sqrt{m} - 3\sqrt{5} = \sqrt{5} + 6\sqrt{m}$

What value of m is the solution to the given equation?

- A) $\frac{4\sqrt{5}}{3}$
- B) $\frac{20}{3}$
- C) $\frac{20}{9}$
- D) $\frac{80}{9}$

5. $\sqrt{x} + 3x = 2\sqrt{x}$

What value of x is the solution to the given equation?

- A) $-\frac{1}{9}$
- B) 0
- C) $\frac{1}{9}$
- D) $\frac{1}{3}$

6. $\sqrt{m} + 8 = 5 + 3\sqrt{m}$

What is the solution to the given equation?

- A) $\frac{2}{3}$
- B) $\frac{4}{9}$
- C) $\frac{3}{2}$
- D) $\frac{9}{4}$

7. $4x - 7\sqrt{x} = 0$

What are all the possible values of x that satisfy the given equation?

- A) $\frac{49}{16}$ only
- B) $\frac{7}{4}$ only
- C) 0 and $\frac{49}{16}$
- D) 0 and $\frac{7}{4}$

8. If $\frac{7x-15}{2x} = 5$, what is the value of x ?

- A) -5
- B) $\frac{15}{17}$
- C) $\frac{25}{7}$
- D) 5

9. $\frac{2x}{x+3} - \frac{4}{x-2} = -3$

What is the sum for all the values of x that satisfy the given equation?

- A) -2
- B) 1
- C) 3
- D) 5

10. $\frac{3x}{x+4} - \frac{4x}{x-2} = -5$

What is the product of all solutions to the given equation?

- A) -10
- B) -8
- C) -2
- D) 5

Grid-In

11. For what value of x is the expression $\frac{1}{x-4}$ undefined?

12. $\frac{12}{2x-3} = 8$

What is the solution to the given equation?

13. $n + 5 = \sqrt{a - n}$

In the given equation, a is a constant. If $n = 2$ is a solution to the equation, what is the value of a ?

14. If $\frac{-2x}{x-10} = -3$, what is the value of x ?

15. $\sqrt{5x-5} = x-1$

What is the product of all solutions to the given equation?