

Reasoning with Equation and Inequalities - Worksheet 2

Answer Key

Solve the following equations:

1. $\frac{x-2}{x-1} = x + 2$

$x = 0.$

6. $\sqrt{x^2 + 5x - 2} = 2$

$x = 3\sqrt[3]{4}.$

2. $\sqrt{x+4} = x+2$

$x = 0.$

7. $\frac{\sqrt{3x}}{2} = \frac{9}{x}$

No solution.

3. $\frac{\sqrt{2x}}{x-4} = 1$

$x = 8.$

8. $\frac{\sqrt{x+1}}{x+1} = \frac{1}{2}$

$x = 3 \pm 2\sqrt{2}.$

4. $\sqrt{x+3} = \sqrt{x} + 3$

No solution.

9. $\sqrt{x} = \frac{\sqrt{x+1}}{\sqrt{x}}.$

$x = \frac{3 \pm \sqrt{5}}{2}.$

5. $\frac{x^2-1}{x+4} = \frac{x+1}{x+2}$

$x = -1, -\sqrt{6}, \sqrt{6}.$

10. $\frac{x}{\sqrt{x}} = \sqrt{x}$

All real values of x

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