

Radical Equations

Multiple Radicals

$$1. \quad 2\sqrt{x+1} - \sqrt{2x} = \sqrt{x-4}$$

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

$$3. \quad \sqrt{3+x} + \sqrt{x} = \frac{6}{\sqrt{3+x}}$$

$$4. \quad \sqrt{3x+1} + \sqrt{4x-3} = \sqrt{5x+4}$$

$$5. \quad \sqrt{1-x} + \sqrt{x} = \sqrt{x+1}$$

$$6. \quad 2\sqrt{x+2} - \sqrt{x-3} = \sqrt{x+9}$$

$$7. \quad \sqrt{2x+5} - \sqrt{x-1} = \sqrt{x+2}$$

$$8. \quad 2\sqrt{x+2} - 3\sqrt{x-6} = \sqrt{4x-19}$$

$$9. \quad \sqrt{2x-3} - \sqrt{3x+3} + \sqrt{3x-2} = 0$$

$$10. \quad \sqrt{x-3} + \sqrt{x+4} = \sqrt{4x+1}$$

Answers

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$$1. x = 8$$

$$2. x = 5$$

$$3. x = 1$$

$$4. x = 1$$

$$5. x = 0, x = \frac{4}{5}$$

$$6. x = 7$$

$$7. x = 2$$

$$8. x = 7$$

$$9. x = 2$$

$$10. x = 12$$