

Math 2 Unit 3.6 Example Solve Radical Equations

Solve each equation. Remember to check for extraneous solutions.

1) $1 = \sqrt{x+1}$

2) $\sqrt{\frac{r}{6}} = 5$

3) $\sqrt{r+4} = \sqrt{4-5r}$

4) $\sqrt{8-2r} = \sqrt{2r}$

5) $\sqrt{x} = \sqrt{14-x}$

6) $\sqrt{7-x} = \sqrt{2x-2}$

7) $\sqrt{8-x} = \sqrt{13-2x}$

8) $\sqrt{16-2x} = \sqrt{2x-4}$

9) $\sqrt{12-b} = b$

10) $\sqrt{72-p} = p$

11) $\sqrt{42-n} = n$

12) $\sqrt{-5+6r} = r$

$$13) r = \sqrt{72 - r}$$

$$14) \sqrt{20 - b} = b$$

$$15) 4 + \sqrt{4a - 16} = a$$

$$16) \sqrt{41 - 5n} = n - 9$$

$$17) \sqrt{m - 4} = m - 4$$

$$18) n = 8 + \sqrt{37 - 4n}$$

$$19) -x + \sqrt{3 - 2x} = -2$$

$$20) 2 - \sqrt{3b + 4} = \sqrt{2b - 5}$$

$$21) \sqrt{2p + 1} - 1 = \sqrt{2p - 4}$$

$$22) \sqrt{3m - 8} = \sqrt{4m - 7} - 1$$

$$23) \sqrt{5 - x} + 3 = \sqrt{5x - 4}$$

$$24) \sqrt{2v - 1} = \sqrt{9 - v} + 1$$

Math 2 Unit 3.6 Example Solve Radical Equations

Solve each equation. Remember to check for extraneous solutions.

1) $1 = \sqrt{x+1}$

 $\{0\}$

2) $\sqrt{\frac{r}{6}} = 5$

 $\{150\}$

3) $\sqrt{r+4} = \sqrt{4-5r}$

 $\{0\}$

4) $\sqrt{8-2r} = \sqrt{2r}$

 $\{2\}$

5) $\sqrt{x} = \sqrt{14-x}$

 $\{7\}$

6) $\sqrt{7-x} = \sqrt{2x-2}$

 $\{3\}$

7) $\sqrt{8-x} = \sqrt{13-2x}$

 $\{5\}$

8) $\sqrt{16-2x} = \sqrt{2x-4}$

 $\{5\}$

9) $\sqrt{12-b} = b$

 $\{3\}$

10) $\sqrt{72-p} = p$

 $\{8\}$

11) $\sqrt{42-n} = n$

 $\{6\}$

12) $\sqrt{-5+6r} = r$

 $\{5, 1\}$

$$13) r = \sqrt{72 - r}$$

$\{8\}$

$$14) \sqrt{20 - b} = b$$

$\{4\}$

$$15) 4 + \sqrt{4a - 16} = a$$

$\{4, 8\}$

$$16) \sqrt{41 - 5n} = n - 9$$

No solution.

$$17) \sqrt{m - 4} = m - 4$$

$\{5, 4\}$

$$18) n = 8 + \sqrt{37 - 4n}$$

$\{9\}$

$$19) -x + \sqrt{3 - 2x} = -2$$

No solution.

$$20) 2 - \sqrt{3b + 4} = \sqrt{2b - 5}$$

No solution.

$$21) \sqrt{2p + 1} - 1 = \sqrt{2p - 4}$$

$\{4\}$

$$22) \sqrt{3m - 8} = \sqrt{4m - 7} - 1$$

$\{8, 4\}$

$$23) \sqrt{5 - x} + 3 = \sqrt{5x - 4}$$

$\{4\}$

$$24) \sqrt{2v - 1} = \sqrt{9 - v} + 1$$

$\{5\}$