

Solving Radical Equations

Date _____ Period _____

Solve each equation. Remember to check for extraneous solutions.

1) $\sqrt{2p} = 4$

2) $4 = \sqrt{k}$

3) $5 = \sqrt{b}$

4) $\sqrt{n+3} = 1$

5) $\sqrt{k} = 1$

6) $\sqrt{x-4} = 0$

7) $\sqrt{v-1} = 9$

8) $n = \sqrt{30-n}$

9) $\sqrt{4-12n} = 8$

10) $\sqrt{a-3} = \sqrt{21-2a}$

11) $1 = \sqrt{-6-b}$

12) $\sqrt{3v+30} = \sqrt{-2-v}$

13) $n = \sqrt{-14+9n}$

$$14) \sqrt{-2 - 2r} = \sqrt{3 - r}$$

$$15) \sqrt{7 - v} = \sqrt{v - 3}$$

$$16) \sqrt{10x} = x$$

$$17) a = \sqrt{12 - a}$$

$$18) \sqrt{-9 - 2b} = \sqrt{2b + 27}$$

$$19) 9\sqrt{v + 8} = 18$$

$$20) 1 = -r + \sqrt{4r + 36}$$

$$21) \sqrt{30 + 7n} = n$$

$$22) v = \sqrt{-1 - 2v}$$

$$23) v = \sqrt{56 - v}$$

$$24) \sqrt{-16 + 8k} = k$$

$$25) 2 = \sqrt{r + 3} + 1$$

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Date _____ Period _____

Solve each equation. Remember to check for extraneous solutions.

1) $\sqrt{2p} = 4$
{8}

2) $4 = \sqrt{k}$
{16}

3) $5 = \sqrt{b}$
{25}

4) $\sqrt{n+3} = 1$
{-2}

5) $\sqrt{k} = 1$
{1}

6) $\sqrt{x-4} = 0$
{4}

7) $\sqrt{v-1} = 9$
{82}

8) $n = \sqrt{30-n}$
{5}

9) $\sqrt{4-12n} = 8$
{-5}

10) $\sqrt{a-3} = \sqrt{21-2a}$
{8}

11) $1 = \sqrt{-6-b}$
{-7}

12) $\sqrt{3v+30} = \sqrt{-2-v}$
{-8}

13) $n = \sqrt{-14+9n}$
{7, 2}

$$14) \sqrt{-2 - 2r} = \sqrt{3 - r}$$
$$\{-5\}$$

$$15) \sqrt{7 - v} = \sqrt{v - 3}$$
$$\{5\}$$

$$16) \sqrt{10x} = x$$
$$\{0, 10\}$$

$$17) a = \sqrt{12 - a}$$
$$\{3\}$$

$$18) \sqrt{-9 - 2b} = \sqrt{2b + 27}$$
$$\{-9\}$$

$$19) 9\sqrt{v + 8} = 18$$
$$\{-4\}$$

$$20) 1 = -r + \sqrt{4r + 36}$$
$$\{7\}$$

$$21) \sqrt{30 + 7n} = n$$
$$\{10\}$$

$$22) v = \sqrt{-1 - 2v}$$
$$\text{No solution.}$$

$$23) v = \sqrt{56 - v}$$
$$\{7\}$$

$$24) \sqrt{-16 + 8k} = k$$
$$\{4\}$$

$$25) 2 = \sqrt{r + 3} + 1$$
$$\{-2\}$$