

Review: Solving Radical Equations

Solve each equation. Check for extraneous solutions.

1) $\sqrt{x} + 4 = 0$

2) $\sqrt{w} - 6 = 0$

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

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

5) $10 = 8 + \sqrt{x+1}$

6) $-3 = 2 + \sqrt{x+2}$

7) $3\sqrt{x-1} - 4 = 2$

8) $\sqrt{2x+3} = x$

9) $x+1 = \sqrt{x+3}$

10) $\sqrt{3x} = 6 - x$

Answers:

1) $\emptyset$ ($-4 \rightarrow$ extraneous)

2) $w = 36$

3) $x = 18$

4) $x = 5$

5) $x = 3$

6) $\emptyset$ ($23 \rightarrow$ extraneous)

7) $x = 5$

8) $x = 3$ ($-1 \rightarrow$ extraneous)

9) $x = 1$ ($-2 \rightarrow$ extraneous)

10) $x = 3$ ($12 \rightarrow$ extraneous)