Worksheet #8 - Equations with Radicals

In this worksheet, you will practice solving equations that involve square-roots and cube-roots.

Find all real solutions of each equation. Also, be sure to check your answers and to identify any extraneous solutions. Show all your work.

1. \( \sqrt{2x - 3} = 3 \)

2. \( \sqrt{3 - 2x} - 4 = 2 \)

3. \( \sqrt{4x + 3} = -2 \)
4 $\sqrt{x^2 + 16} = 5$

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

6 $\sqrt{x + 1} = \sqrt{x + 3}$
7. $\sqrt{x + 1} + \sqrt{x} = 2$

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

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