Chapter 6 Section 4: More Solving Radical Equations

Remember, when solving radical equations:

1. Isolate the radical on one side of the equation, if necessary (or if possible!)
2. Raise each side of the equation to the same exponent to eliminate the radical symbol
3. Solve the equation using techniques from previous chapters
4. CHECK in order to identify extraneous solutions!!!!

Example 7: Solve: \( \sqrt{2x + 5} = \sqrt{x + 7} \)

Example 8: Solve: \( \sqrt[3]{3x - 3} - \sqrt{x + 12} = 0 \)
Example 8: Solve: $\sqrt{x + 2} + 1 = \sqrt{3 - x}$

Alternative method: Solve by graphing.

1. Graph each side of the equation: $\sqrt{x + 2} + 1 = \sqrt{3 - x}$
   
   $f_1(x) = \sqrt{x + 2} + 1$
   
   $f_2(x) = \sqrt{3 - x}$

2. Find the ______________ of the point of intersection.
   
   (The solution is ______________)

Be sure to follow all instructions! If you are asked to solve algebraically, then you must show all work! If you are asked to solve, then you can choose the method that you want to use!