



Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

## SOLVING RADICAL EQUATIONS/INEQUALITIES WORKSHEET

### Steps for Solving a Radical Equation:

- Isolate the radical.
- Raise both sides to the  $n$ th power, where  $n$  is the index of the radical.
- Isolate the variable.
- Check your solution in the original equation. This is crucial, as you may obtain extraneous solutions – solutions that do not work in the original equation.

1.  $\sqrt{4x+9} = 5$

CHECK

2.  $\sqrt[3]{5-11x} = 3$

CHECK

3.  $\sqrt[3]{x^2-1} = 2$

CHECK

4.  $\sqrt{x+7} = x-5$

CHECK

5.  $\sqrt{2x+15} = x+6$

CHECK

6.  $\sqrt[3]{4x-1} - 4 = -1$

CHECK

7.  $\sqrt{3x-4} = \sqrt{5x+2}$

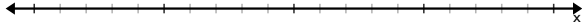
CHECK

8.  $\sqrt{4x+21} = x$

CHECK

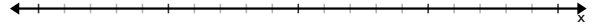
$$9. 2\sqrt{x} - 5 \geq 3$$

CHECK



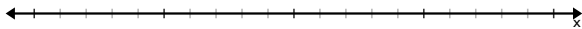
$$10. 2\sqrt{-(x-4)} - 6 \leq 0$$

CHECK



$$11. \sqrt{x+7} \geq 3$$

CHECK



$$12. -\sqrt{x+2} > -4$$

CHECK

