Name:_____   Date:_____
PCH: Radical Equations with Restriction Sets   Ms. Loughran

Do Now:

Find the equation of the parabola, in standard form, with the following characteristics:

1. vertex: $(-1,2)$ 2. focus: $(2,2)$
   focus: $(-1,0)$ directrix: $x=-2$

Model:
   1. Solve for x: $x+\sqrt{x}=1$

Classwork:

Solve each equation. Show restriction sets.

1. $\sqrt{x+11} + x = 1$ 2. $\sqrt{1+x} + x = 5$

3. $\sqrt{x} + \sqrt{x-5} = 5$ 4. $\sqrt{x-1} + \sqrt{3x+2} = 3$

5. $\sqrt{10-x} - \sqrt{x+3} = 1$

6. $\sqrt{4x+1} + \sqrt{x+7} = 6$

7. $\sqrt{x+4} + \sqrt{3x+1} = 7$

8. $\sqrt{x-7} = 7 - \sqrt{x}$

9. $2x - 5\sqrt{x} - 3 = 0$

10. $x = 8 - 2\sqrt{x}$