**Multi-Step Equations with Square Roots**

Suppose we have a parabolic solar cooker with a diameter of 4 feet. The parabola may be modeled by the equation  with the *x*-axis measured along a diameter of the solar cooker starting at a point on the rim.

This graph below shows a cross section of the parabolic mirror in the coordinate plane.



1. Solve the equation  using the “undoing method.” Think about the order of operations and complete the flow chart.
2. Solve the equation  using a step-by-step approach. For each step tell what property of equality you are using.
3. Check each solution by substituting the values you found for *x* into the equation.
4. Do your solutions to the equation make sense in the context of the problem? Explain.
5. Solve this equation using a flow chart: 
6. Solve this equation using a step-by-step approach: 
7. Solve this equation using either method: 
8. Explain why you chose the method you used in problem 7.
9. Returning to the solar cooker example at the top of page one, solve the equation . Explain what the solution represents in this context.
10. What does the solution to the equation  represent in the solar cooker context?