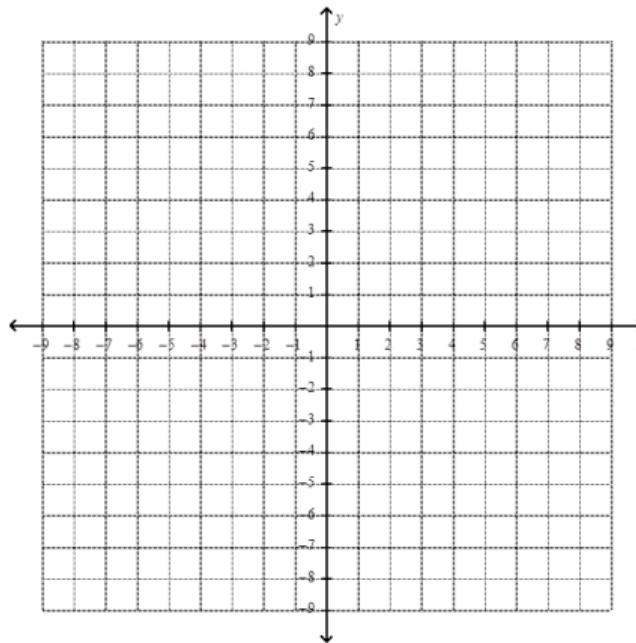# Solving Radical Equations

Determine the roots of the equation $\sqrt{x-2} - 1 = 0$.

Now graph the function $y = \sqrt{x-2} - 1$. What is the x-intercept of the graph?

What is the relationship between the graph of the function $y = \sqrt{x-2} - 1$ and the root of the equation $\sqrt{x-2} - 1 = 0$?

Solving Equations Involving Extraneous Roots

An _____ is a number obtained by solving an equation
that does not meet the initial restrictions on the variable. Extraneous roots
_____ solutions to the equation.

Example 1

Solve the equation $\sqrt{x + 4} = 2x - 7$
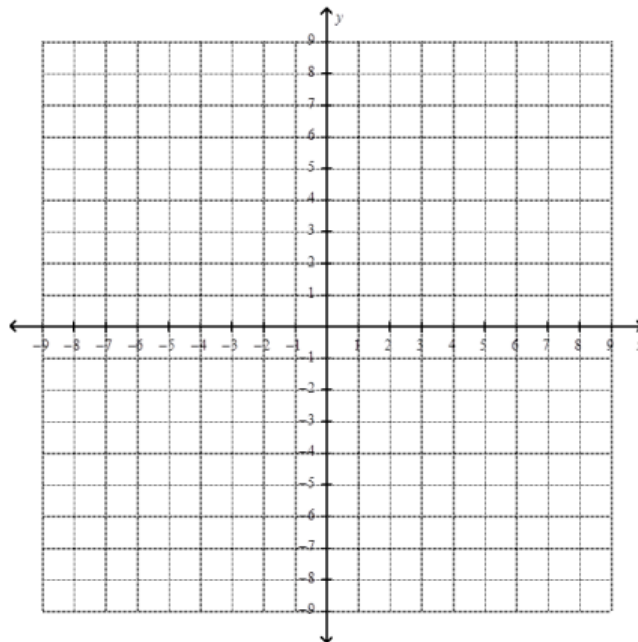
Your Turn! Try question #4 on page 96 of your textbook.

Using Technology to Solve Radical Equations Graphically

Approximate the solution to the equation $\sqrt{2x^2 - 1} = x + 3$ using technology. Verify your solution algebraically.

Approximate Solutions:

Your Turn!

Try question #3 on page 96 of your textbook.