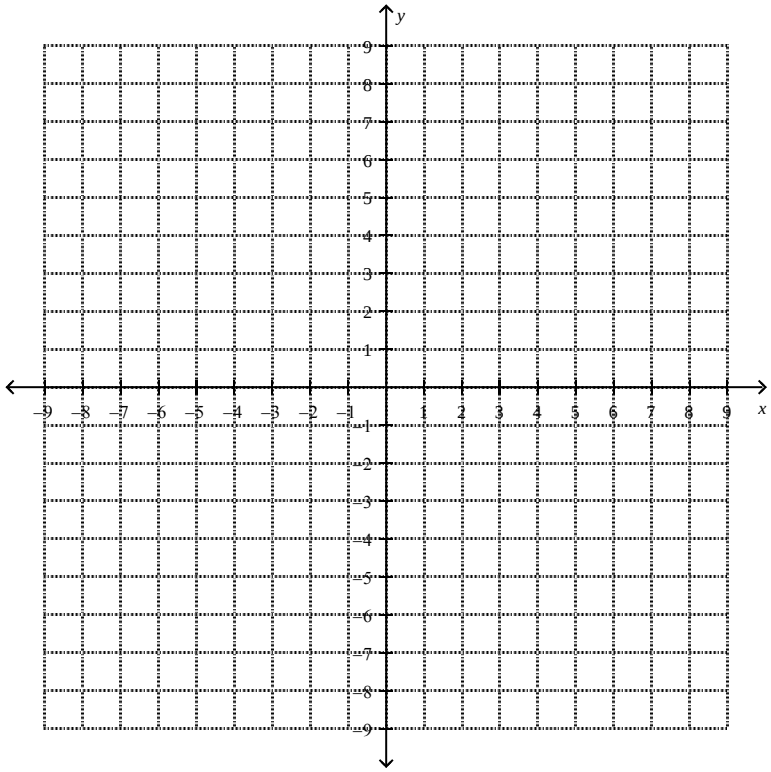
Radical Functions and Transformations

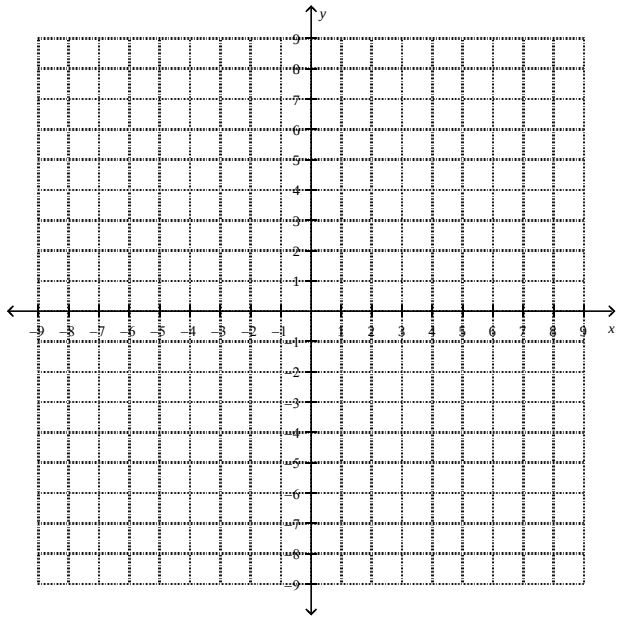
A function is considered a _____ if it contains a radical with a _____ in the _____.

$y = \sqrt{x}$ is an example of a radical function.

Write the equation of the inverse of $f(x) = x^2$. Graph both $f(x)$ and $f^{-1}(x)$ on the same graph.

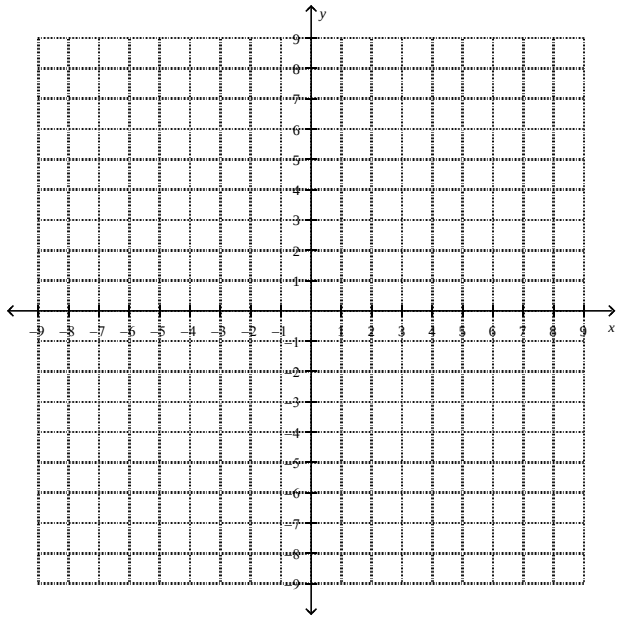


Now graph $f(x)$ for $\{x|x \geq 0, x \in R\}$ and its inverse on the same graph.



<u>Example</u>

Use a table of values to sketch a graph of the function $y = \sqrt{x}$. What are the domain and range of the function?



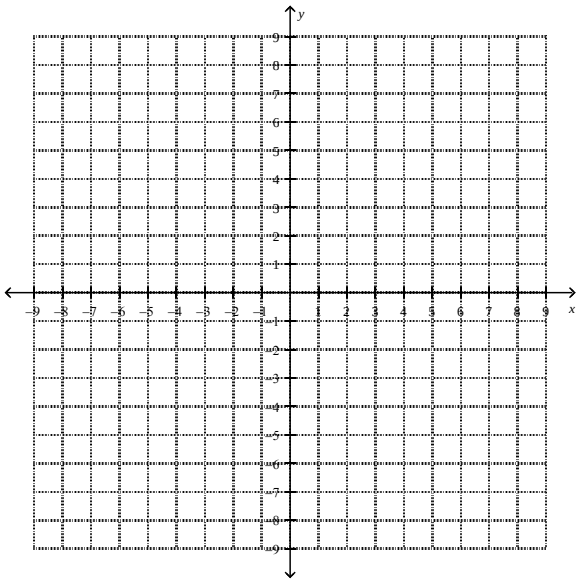
What do you notice?

Example 1

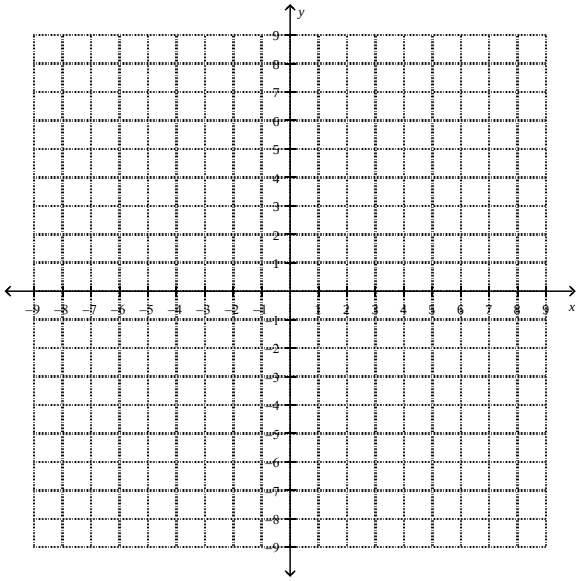
Use your knowledge of transformations to graph the function

$y = -2\sqrt{x-1} + 3$. What are the domain and range of this function?

Method 1



Method 2



Example 2

Determine the equation of the following function.