

Name \_\_\_\_\_

## Algebra II

### Lesson 7-8

#### Graphing Square Root and Other Radical Functions

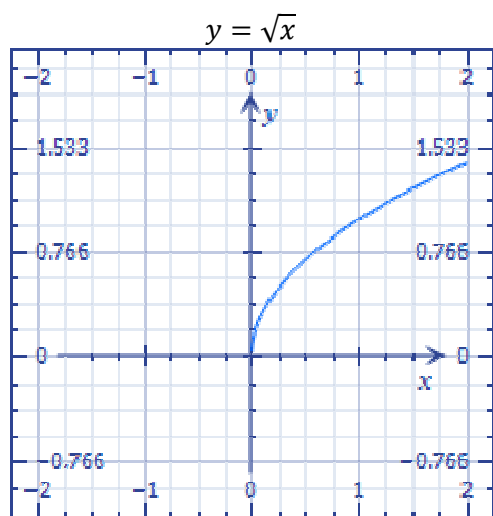
Graphing square root functions is handled in the same fashion that other functions are graphed. Care should be given to equation entry on the calculator. Understand that the calculator sees the equation in terms of order of operation. So an exponent of  $\frac{2}{3}$  may be interpreted by a calculator as an exponent of 2 and all divided by 3.

Compare the graphs of these two equations entered into the calculator as typed:

$2(x+3)^{2/3}$  vs.  $2(x+3)^{(2/3)}$ . While you want the exponent of  $2/3$  the first entry is seen as  $2(x+3)^2$  (a parabola) all divided by 2!

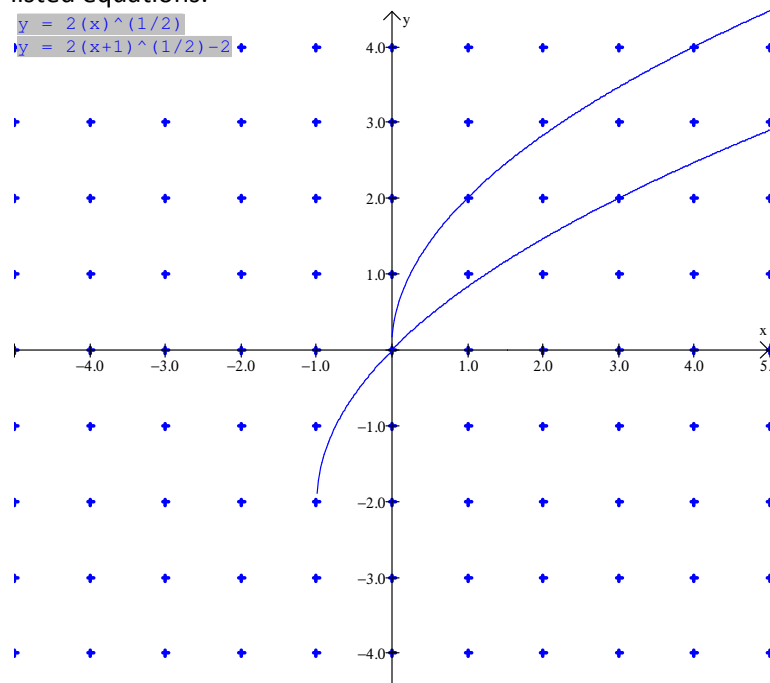
Recognize that when a square root is graphed, the domain may be quickly be determined by x starting or stopping on one of the axes.

Graphing the **parent function** for the square roots we get:



What is the domain for this graph?

Notice the shift in the graph but the same general look for the two listed equations:



What are the domains for each of these graphs?