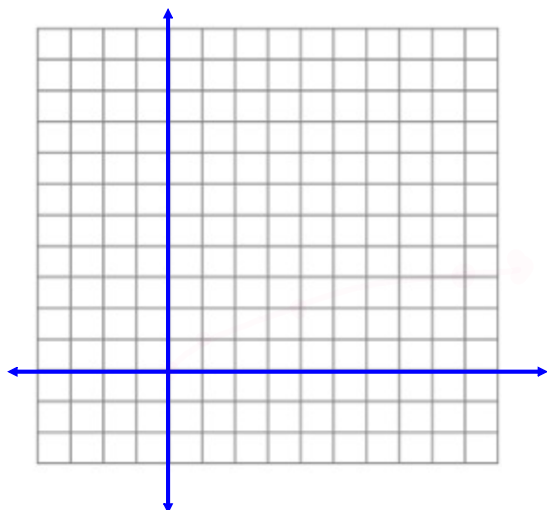


Graphing Radical Functions

The parent function looks like: $y = \sqrt{x}$



x	y
-2	Error
-1	Error
0	0
1	1
4	2
9	3

Domain: $[0, +\infty)$

Range: $[0, +\infty)$

x-Intercept: $(0,0)$

Y-Intercept: $(0,0)$

Increasing

Standard h and k format

$$y = k + b\sqrt{ax - h}$$

h is movement on the x-axis

k is movement on the y-axis

Domain: use the "stuff" under the radical and make it equal zero and solve.

Range: plug in the start of the domain into the equation and calculate for the start of the range.

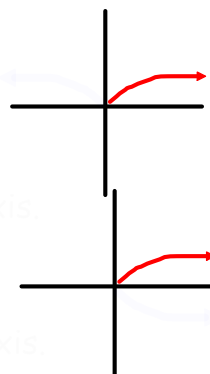
x-Intercept: plug in 0 for y and solve.

Y-Intercept: plug 0 in for x and solve.

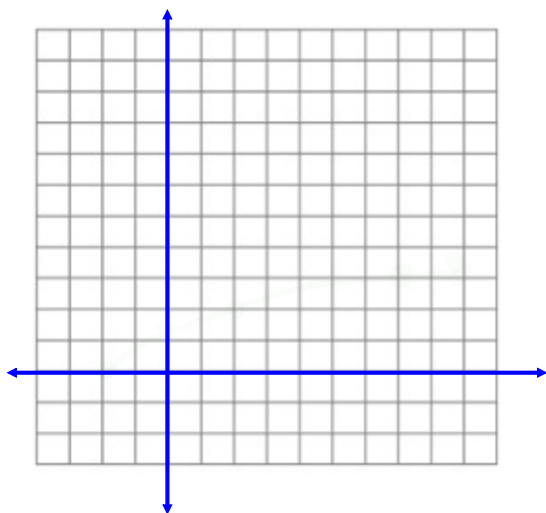
If a is negative the graph is reflected over the y-axis.

This means the domain is $(-\infty, h/a]$

If b is negative the graph is reflected over the x-axis.



$$y = \sqrt{x + 2}$$



x	y

Domain: $[-2, +\infty)$

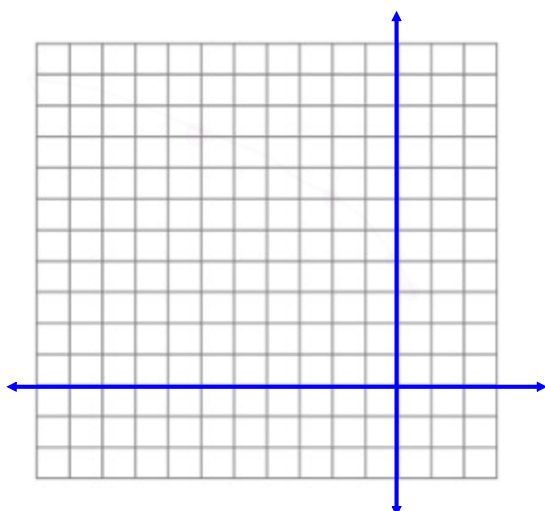
x-Intercept: $(-2, 0)$

Y-Intercept: $(0, \sqrt{2})$

a is:

b is: pos

$$y = 3 + \sqrt{-4x + 1}$$



x	y

Domain: $(-\infty, \frac{1}{4})$

x-Intercept: NONE

Y-Intercept: $(0, 4)$