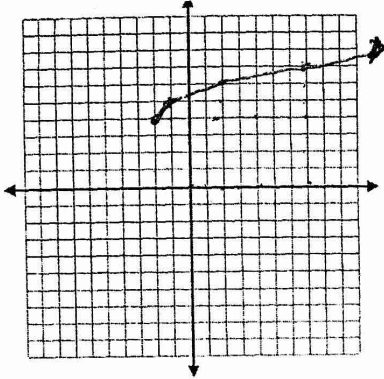


1. Graph the square root function without using a calculator!

$$y = \sqrt{x + 2} + 4$$

x	y
-2	4
-1	5
2	6
7	7



2. Use your graph from problem #1 to answer the following questions:

Domain:  $x \geq -2$

Range:  $y \geq 4$

Starting Point:  $(-2, 4)$

How did the graph change from its parent graph of  $y = \sqrt{x}$ ?

left + 2  
up 4

3. Use the following square root function to answer the questions:

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

Starting Point:  $(4, -1)$

Domain:  $x \geq 4$

Range:  $y \geq -1$

4. Use the table of values to answer the questions:

x	y
0	error
1	error
2	1
3	2
4	2.4142
5	2.7321
6	3

Domain:  $x \geq 2$

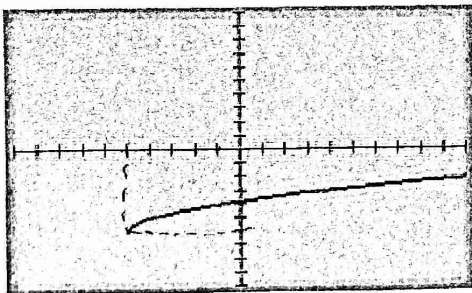
Range:  $y \geq 1$

Starting Point:  $(2, 1)$

Equation:  $y = \sqrt{x - 2} + 1$

5. Write an equation that will model the graph below

Equation:  $y = \sqrt{x + 5} + 6$



6. Write a square root function that is decreasing, has been shifted to the right 1 units, and has been shifted up 4 units from its parent function. Sketch a graph of your function.

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

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