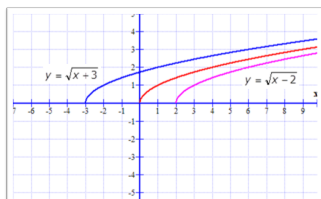


UNIT #4: Inverses and Transformations of Functions
Horizontal and Vertical Translations

Learning Goal:

I will learn how to graph and interpret horizontal and vertical translations of functions.



Lesson: Horizontal and Vertical Translations

Vertical Translations

Graph:

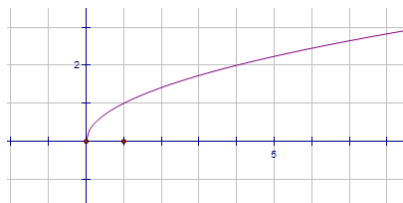
$$y = \sqrt{x}$$

$$y = \sqrt{x} + 5$$

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

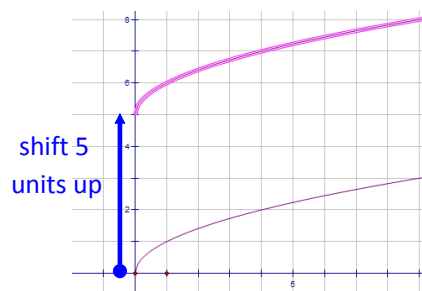
$$y = \sqrt{x}$$

x	y
0	0
1	1
4	2
16	4

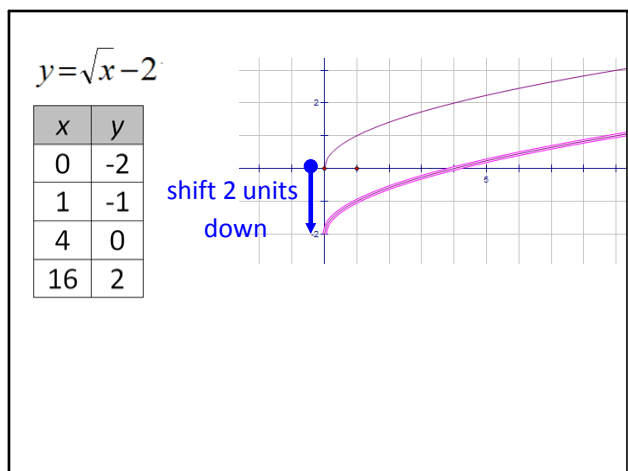


$$y = \sqrt{x} + 5$$

x	y
0	5
1	6
4	7
16	9



Horizontal and Vertical Translations (Lesson).notebook



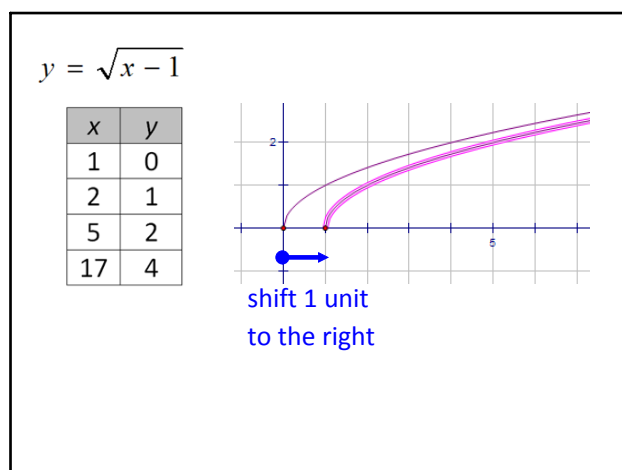
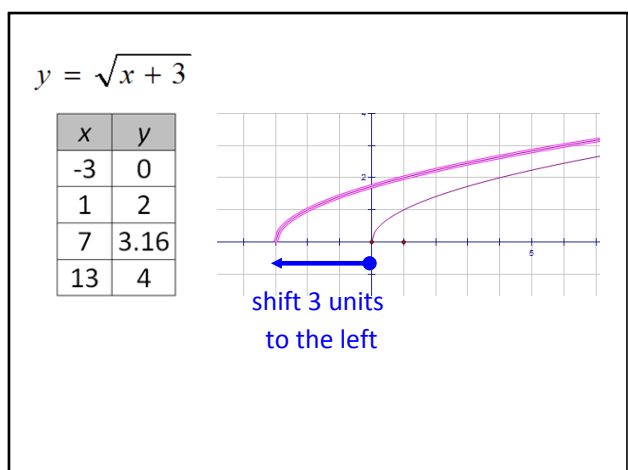
Horizontal Translations

Graph:

$$y = \sqrt{x}$$

$$y = \sqrt{x+3}$$

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



Summary:		
Translation	Mathematical Form	Effect
Vertical	$y = f(x) + k$	If $k > 0$, shift k units up If $k < 0$, shift k units down
Horizontal	$y = f(x - h)$	If $h > 0$, then h units to the right If $h < 0$, then h units to the left

the same rules when its
a square root sign

UNIT 4: Inverses and Transformation of Functions

Horizontal and Vertical Translations

Learning Goal:

I will learn how to graph and interpret horizontal and vertical translations of functions.

Success Criteria:

To be successful, I must be able to...

- Graph functions by creating a table of values
- Interpret the horizontal and vertical translations of a function

Practice Work

Pg. 190 #1, 4(e,f), 5, 7, 8

