Algebra 1
Lesson 10.5
Graphing Square Root
Functions

Goal: to graph and translate the graphs of square root functions.

Graph the function:

$$y = \sqrt{x}$$

$$x \mid y$$

$$-x \mid -1 \mid 0$$

$$-1 \mid 1 \mid 1$$

$$0 \mid 1 \mid 1 \mid 1 \mid 1$$

$$0 \mid 1 \mid 1 \mid 1 \mid 1$$

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Graph the function:

$$y = \sqrt{x}$$

Domain:

When looking at square root functions, we have to eliminate the possibility for the radicand to be a negative, which restricts the domain. To find the domain, the radicand must be greater than or equal to 0.

Find the domain.

$$y = 3\sqrt{2x - 10}$$

$$2x - \sqrt{2} > 0$$

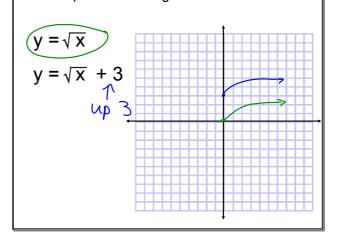
$$y = \sqrt{-2x + 5}$$

$$x \le 25$$

$$x \le 25$$

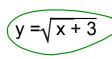
$$x \le 25$$

Graph the following on the same axis.

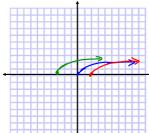


10.5.notebook

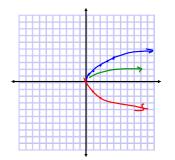
Based on what you know about transformations, graph the following.



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



Make a table to graph the following:



April 25, 2017

Graph the following based on transformations.

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

$$0 \quad x + 1 = 0$$

$$0 \quad x = 0$$

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#8, 12, 20, 24, 26 - 30 all,

34, 54, 58