3-4 Graphing Radical Functions

Objectives:

3-4a: I can graph radical functions by hand.

3-4b: I can identify transformations of radical functions.

Mar 12-10:11 PM

Domain & Range

Domain: x-values - input
read x's from left to right (smallest to largest)

*some functions have domain restrictions

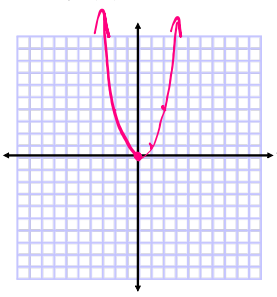
can't have a neg. # in a sq. root
to find: set the radicand ≥ 0 and solve for x.

Range: y-values - output
read y's from bottom to top (smallest to largest)

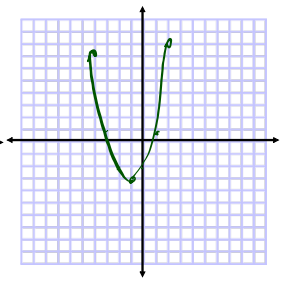
Aug 21-7:34 AM

Recall from last year

$f(x) = x^2$



$f(x) = (x+1)^2 - 3$



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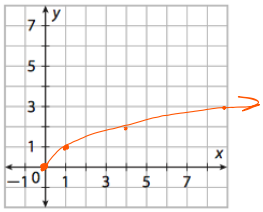
Graph the following and state the domain and range

x	$f(x) = \sqrt{x}$
0	0
1	1
4	2
9	3



Domain:

Range:

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Domain changes
Range changes

$$f(x) = a\sqrt{x - h} + k$$

	Vertical (Range)	Horizontal (Domain)
Translation (Shift) add/subt	k	h (liar!)
Stretch (multiplym)	a	—
Reflection (Flip)	-a	—

Aug 13-10:28 AM

$\sqrt{x} = \sqrt{\ }$ Transformation Form $a\sqrt{x-h}+k$

State the transformations

$$g(x) = 2\sqrt{x-3} - 2$$

- right 3
- down 2
- vert str of 2

$$f(x) = -\sqrt{x-2} + 1$$

- right 2
- up 1
- vert flip

$$h(x) = -3\sqrt{x-2} + 3$$

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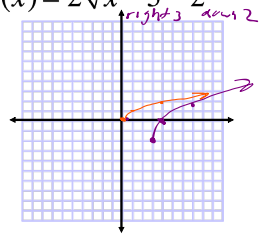
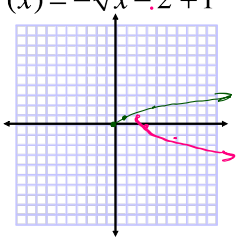
Graph and state the Domain and Range $\sqrt{x}$

$$g(x) = 2\sqrt{x-3} - 2$$

right 3 down 2



$$f(x) = -\sqrt{x-2} + 1$$



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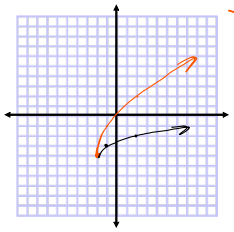
Graph and state the Domain and Range

$$f(x) = 3\sqrt{x+2} - 4$$



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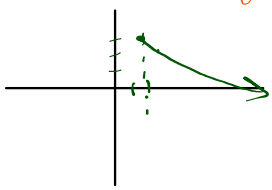
1-4 ~~Dom and Ran~~
State transformation!

14) Dom and Range



Dom: $[2, \infty)$

Ran: $(-\infty, 3]$

Oct 4-9:31 AM

Oct 4-9:29 AM