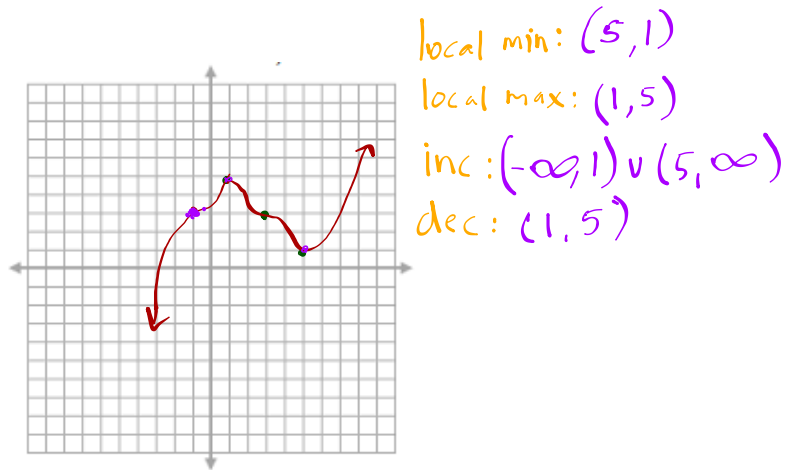


1.2 HW Questions



Sep 18-3:12 PM

1.6 Graphical Transformations

Objectives: 4) I can graph parent functions.

5) I can describe transformations of a function.

6) I can graph functions using transformations.



Sep 14-1:41 PM

1.6 Graphical Transformations

Objectives: 4) I can graph parent functions.

5) I can describe transformations of a function.

6) I can graph functions using transformations.

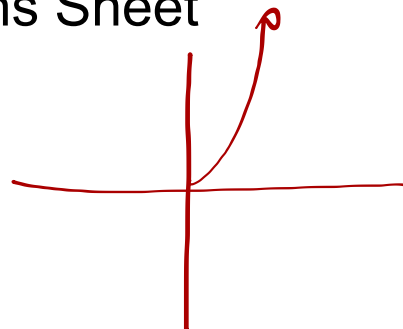


Sep 14-1:41 PM

Parent Functions Sheet



$$x^3$$



Sep 18-3:49 PM

Transformations

Domain changes
Range changes

$$y = \pm a \left(\pm \frac{1}{b} (x - h) \right) + k$$

	Vertical (Range)	Horizontal (Domain)
Translation (Shift) $+/-$	k	h
Stretch/Compress <i>mult.</i>	a	b
Reflection (Flip)	$-a$	$-b$

Oct 10-9:19 AM

Information to remember about transformations....

x's lie

any change to the domain (x's) is opposite of what appears in the equation

Why?

$(2x)^2$

$x - (-2)$
 $x + 2$

$(\frac{1}{2}x)^2$

$(1,1)$ $(2,4)$
 $(\frac{1}{2}, 1)$ $(1, 4)$

$y = a \left(\frac{1}{b} (x - h) \right) + k$

opposite

Oct 10-9:22 AM

Identify the transformations for the given functions.

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

down 2

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

left 3

$$f(x) = 2\sqrt{x}$$

vert. stretch of 2

$$f(x) = \frac{1}{3}\sqrt{x}$$

vert. str. of $\frac{1}{3}$

$$f(x) = -\sqrt{x}$$

vert flip

$$f(x) = \sqrt{\frac{1}{4}x}$$

horiz stretch of 4

$$f(x) = 3\sqrt{\frac{1}{2}(x+1)} - 5$$

vert. str. of 3

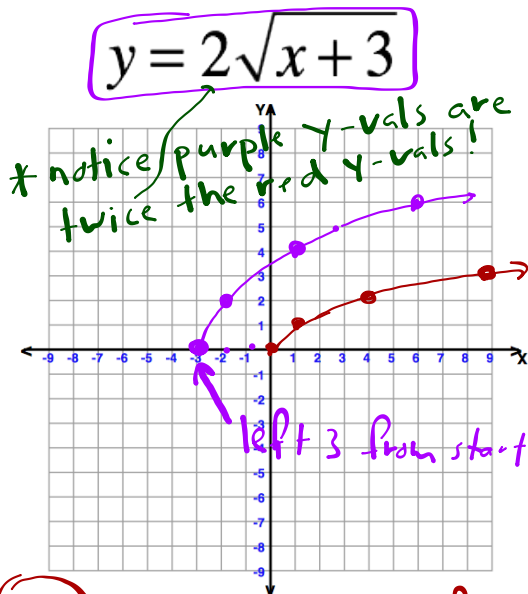
horiz. str. of 2

left 1

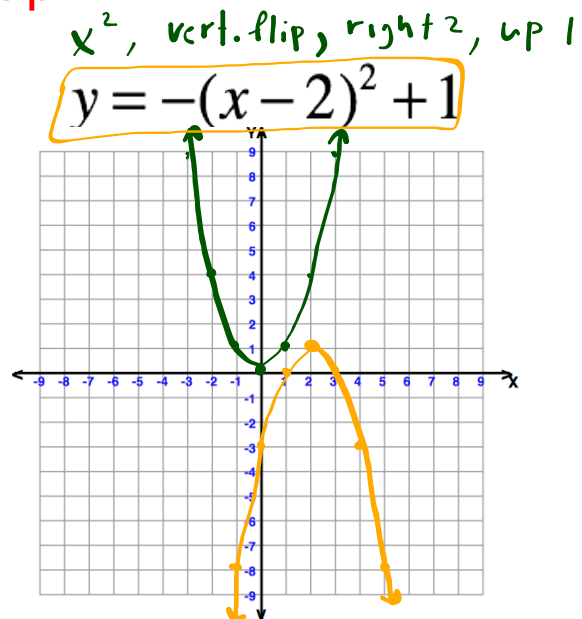
down 5

Oct 10-9:25 AM

State the parent function and identify the transformations and graph



(\sqrt{x}) with vert. str of 2 and shift left 3



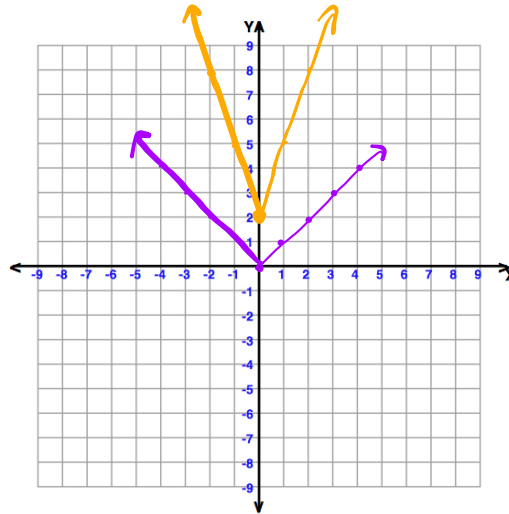
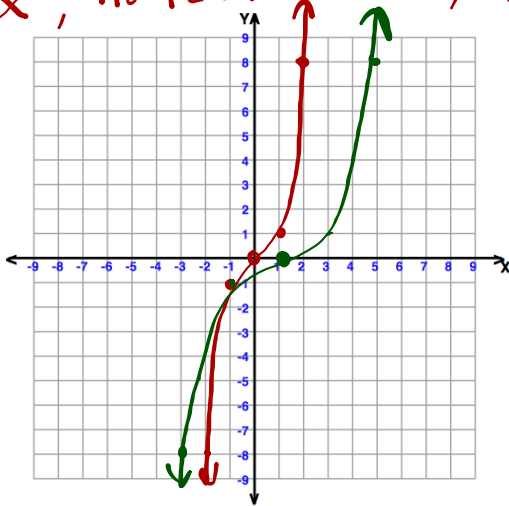
Oct 10-9:41 AM

State the parent function and identify the transformations and graph $|x|$, vert str of 3, up 2

$$f(x) = \left(\frac{1}{2}(x-1)\right)^3$$

$$y = 3|x| + 2$$

x^3 , horiz stretch of 2, right 1

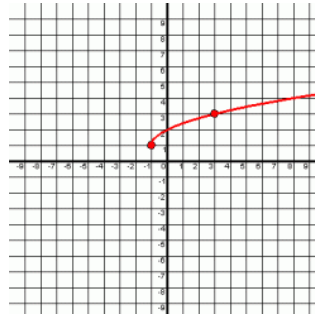


Oct 10-9:45 AM

Write the equation for the function.

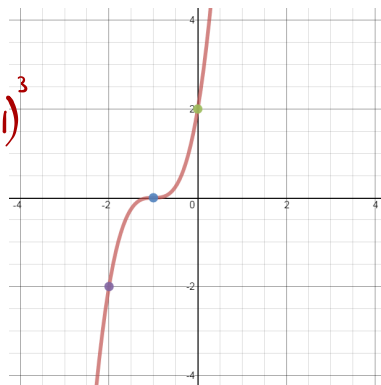


$$f(x) = 2(x-1)^2 + 3$$



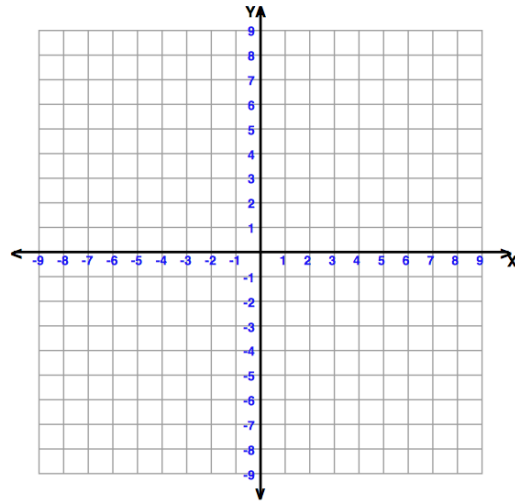
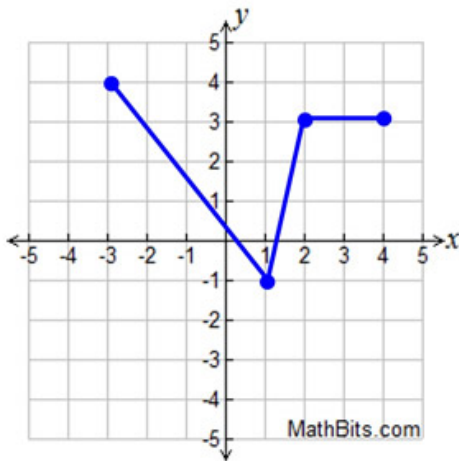
$$f(x) = \sqrt{x+1} + 1$$

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



Oct 10-9:47 AM

With your group of 4...



Sketch the graph of $y = 2(f(x - 1)) + 2$

Oct 10-9:51 AM

Sep 18-3:00 PM