

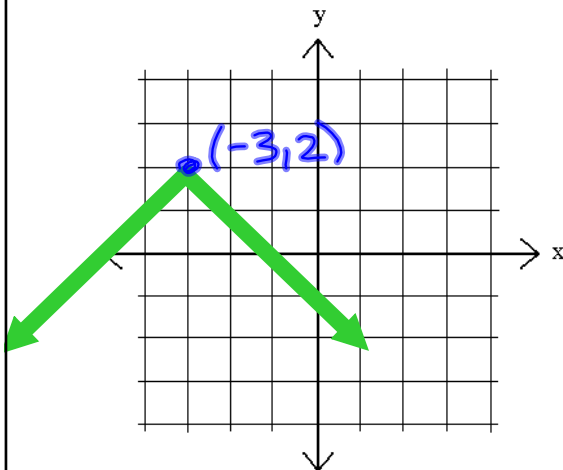
May 7th, 2015

Due Next Class: 12.4 HW

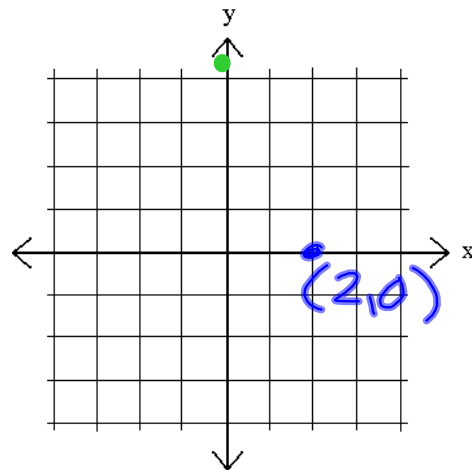
Unit 12: Functions

Lesson 12.4. - Determining Functions & Domain and Range

Get Ready: Write the Equation for the following graphs:



$$f(x) = -|x + 3| + 2$$



$$y = (x - 2)^2$$

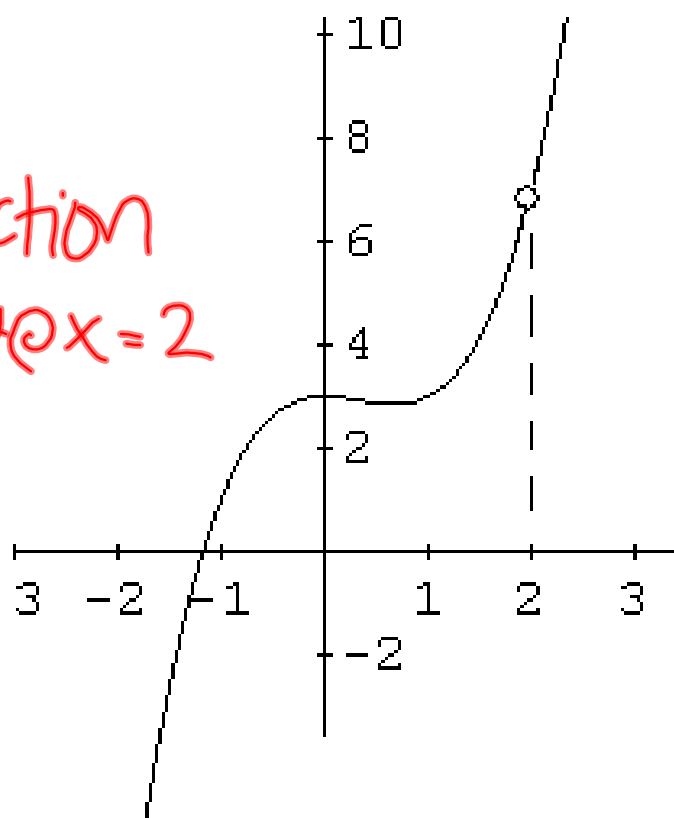
12.3 HW Review



What is this?

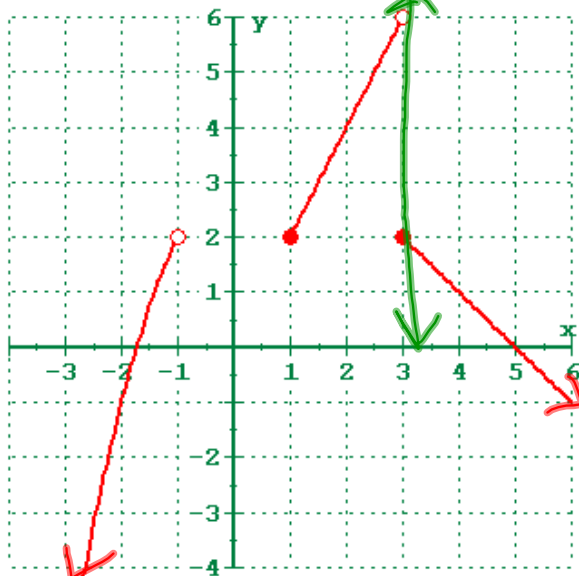
Hole. the function
does not exist @ $x=2$

$$f(2) = \text{dne}$$



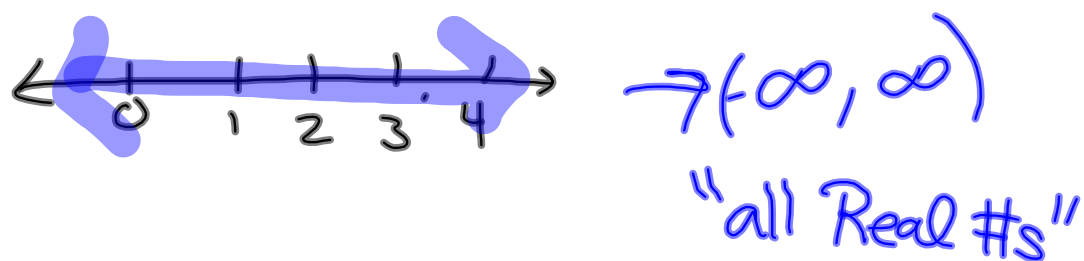
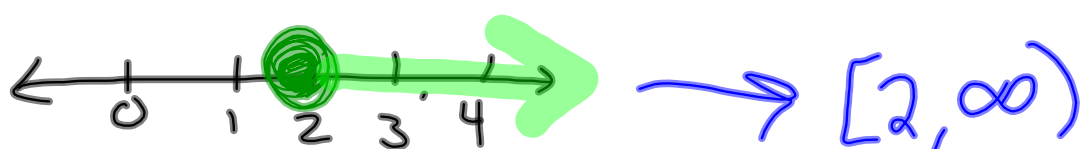
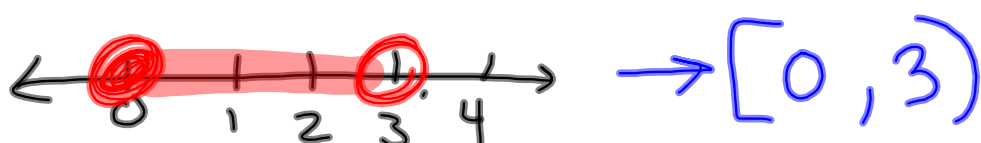
One more type of function...

PIECEWISE FUNCTIONS



FUNKY! - are broken up into pieces, do not go on for ever, can have holes or gaps!

INTERVAL NOTATION



"all Real #s"

$\odot = [,]$

$\bigcirc = (,)$

$\infty = (,)$

$\mathbb{R}$

Domain & Range



Domain is all of the possible x-values the function can have [inputs]

Range is all of the possible y-values the function can have [outputs]

What are all of the possible values?

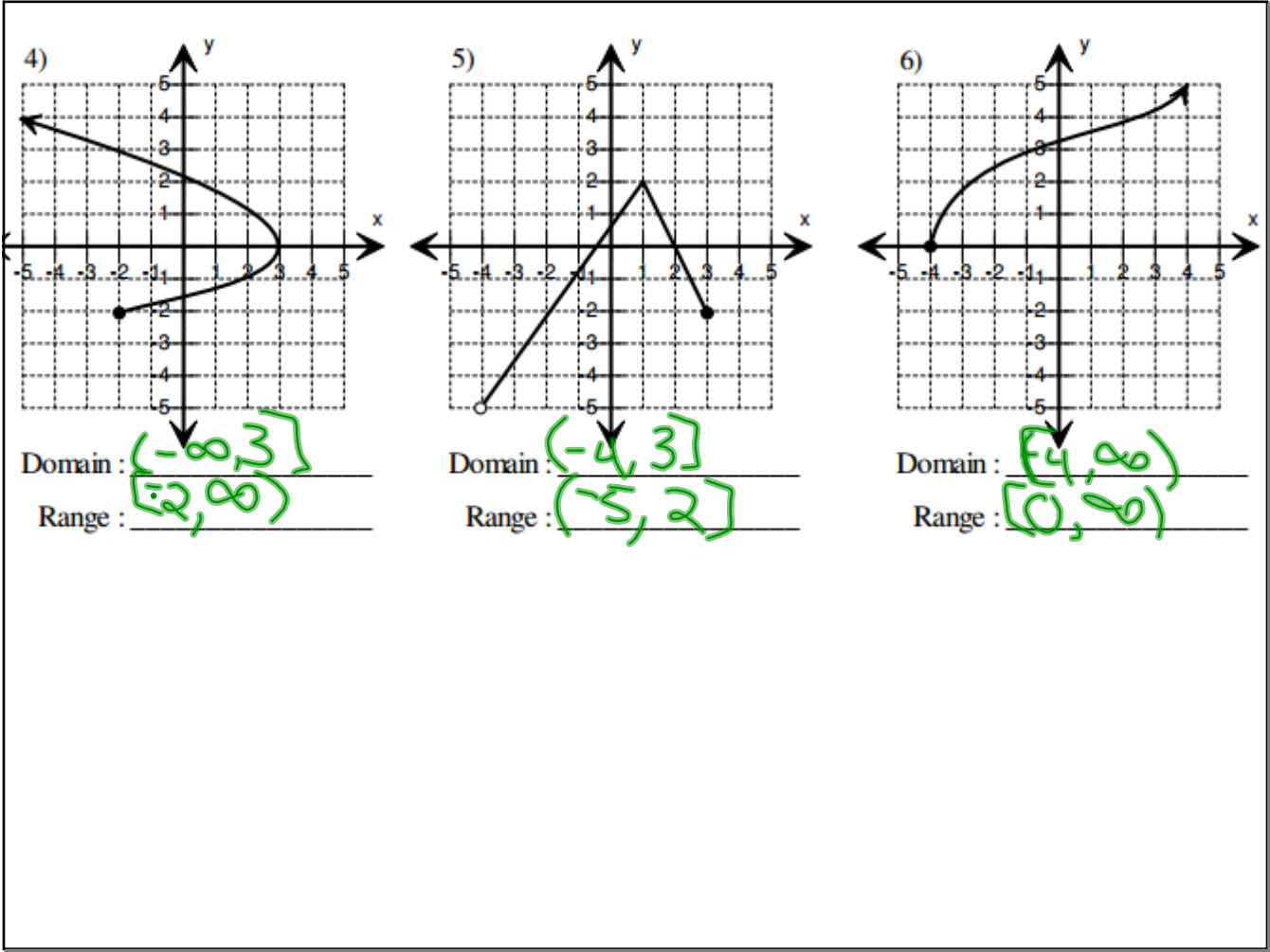
x	y
0	0
1	1
2	4
3	9
4	16

Domain

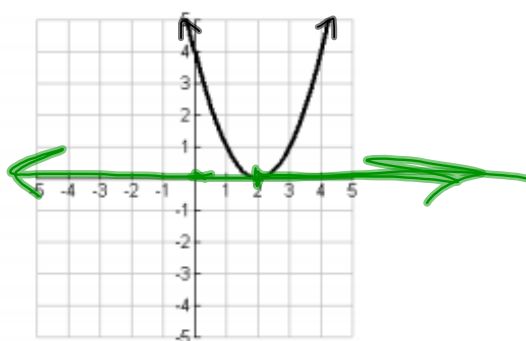
$\{0, 1, 2, 3, 4\}$
 $[0, 4]$

Range

$\{0, 1, 4, 9, 16\}$



What are all of the possible values?



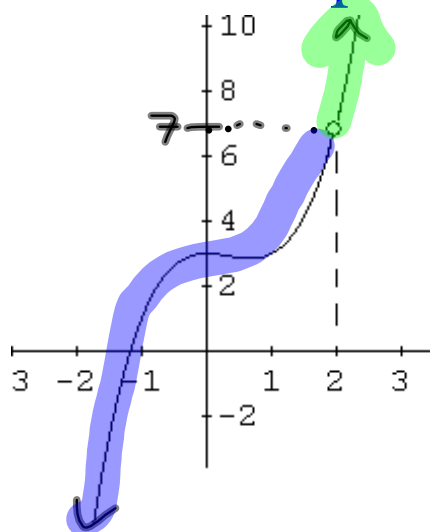
Domain: $\mathbb{R}$

Range: $[0, \infty)$

What are all of the possible values?

Domain:

$\mathbb{R}$ except 2
OR
 $(-\infty, 2)$ and $(2, \infty)$

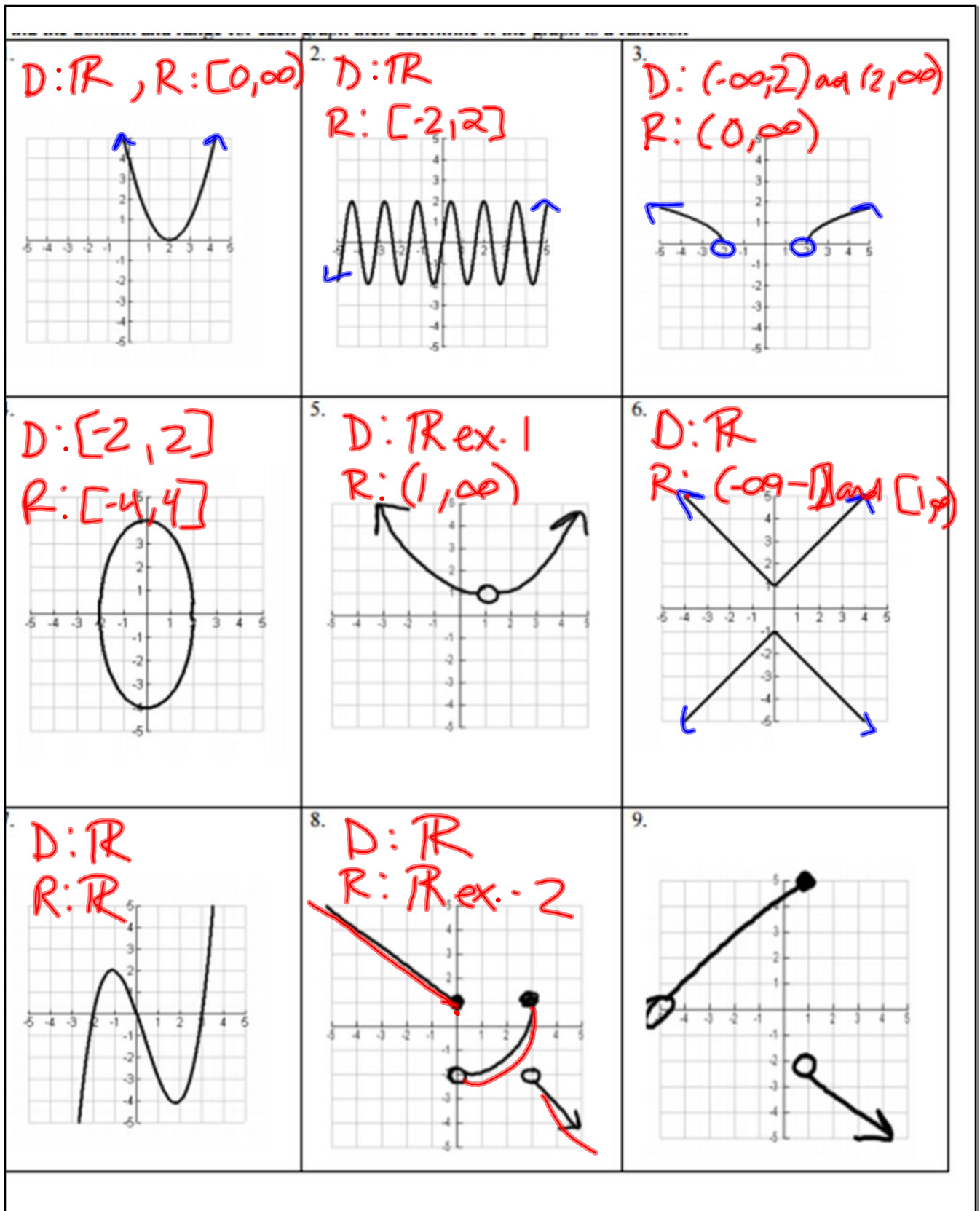


Range:

$\mathbb{R}$ except 7
or
 $(-\infty, 7)$ and $(7, \infty)$

Work in your groups on the class work sheet!

Everyone should be on the same problem at the same time!



Recap	
Key Points	
Next Class: Quiz!	Due Next Time: 12.4 HW

