Pre-Calculus
Unit 1 – August 25 to September 10

Date	Topic	Assignment
Mon 8/25	Introductions	TBA
Tues 8/26	1.1 and 1.2 - Rectangular Coordinates and Graphs of Equations	Pg. 9(11-20) Pg.22(1-3, 9-19, 21-24, 25-31 odd, 45-55 odd, 75)
Wed 8/27	1.3 - Linear Equations in Two Variables	Pg. 35(39-47 all, 51-54 all, 65, 66, 108-118 even)
Thur 8/28	1.4 - Functions	Pg. 49(13-25,28,29,34-37, 45-50, 57, 59, 61, 65, 67, 69)
Fri 8/29	TI-Nspire	TI Nspire Practice
Mon 9/1	Labor Day – No school	
Tues 9/2	Domain and Range	worksheet
Wed 9/3	1.5 - Analyzing Graphs of Functions	Pg. 61 (1-13 odd, 25-47 odd) Pg. 63(49-61 odd, 63-69 odd)
Thur 9/4	1.5 - Analyzing Graphs of Functions	Pg. 61 & 63 continued
Fri 9/5	1.5 - Analyzing Graphs of Functions	Pg. 61 & 63 continued
Mon 9/8	Graphing Piecewise Functions Odd/even	Worksheet: Graphing Piecewise Functions
Tues 9/9	Test 1 Review	
Wed 9/10	**Unit 1 Test**	

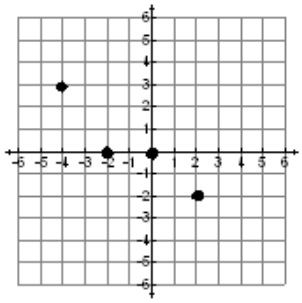
Tuesday September 2: Domain and Range (Notes)

State the domain and range for each picture in set builder notation and then tell if the picture is a function (yes or no). In the blanks below each graph, write the Domain and Range in Interval Notation

1) Domain_____

Range_____

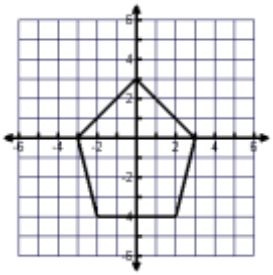
Function?_____



2) Domain_____

Range_____

Function?_____



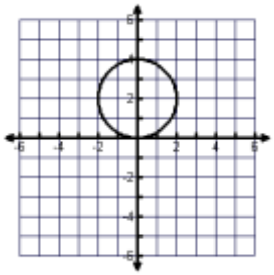
D: _____

R: _____

3) Domain_____

Range_____

Function?_____



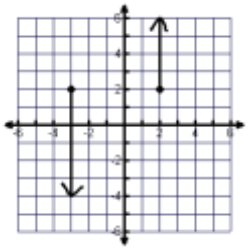
D: _____

R: _____

4) Domain_____

Range_____

Function?_____



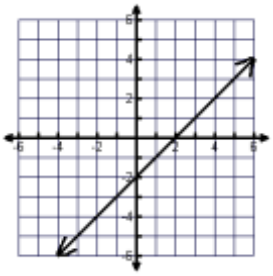
D: _____

R: _____

5) Domain_____

Range_____

Function?_____



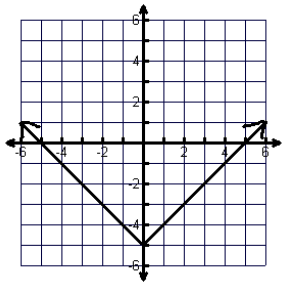
D: _____

R: _____

6) Domain_____

Range_____

Function?_____



D: _____

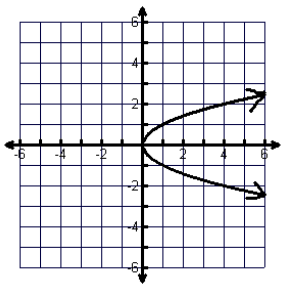
R: _____

Over →

7) Domain_____

Range_____

Function?_____



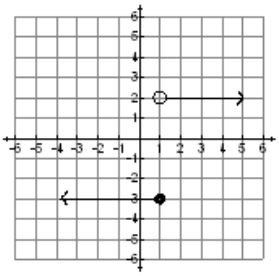
D: _____

R: _____

8) Domain_____

Range_____

Function?_____



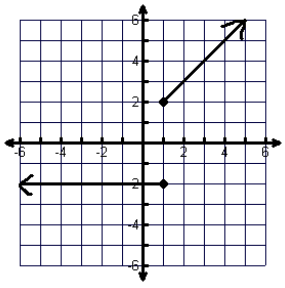
D: _____

R: _____

9) Domain_____

Range_____

Function?_____



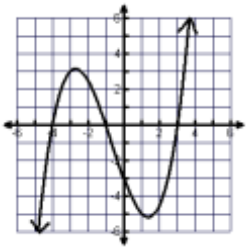
D: _____

R: _____

10) Domain_____

Range_____

Function?_____



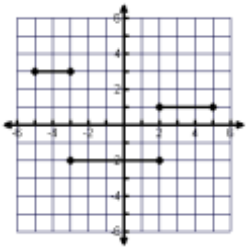
D: _____

R: _____

11) Domain_____

Range_____

Function?_____



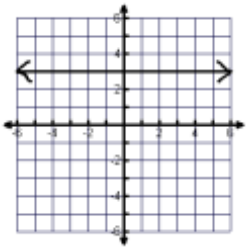
D: _____

R: _____

12) Domain_____

Range_____

Function?_____

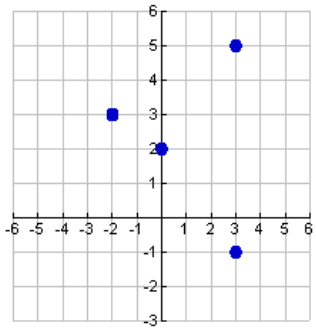


D: _____

R: _____

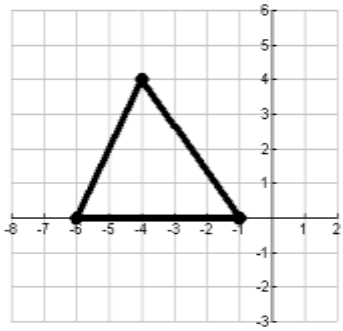
Tuesday Sept 2: Domain and Range (Homework)

I. For each relation do the following (may need a separate sheet of paper): a) determine if it is a function, b) write the domain and range in set builder AND c) interval notation

1. 

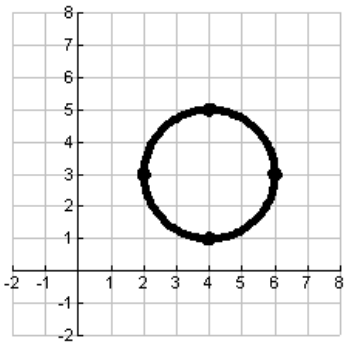
D: _____

R: _____

2. 

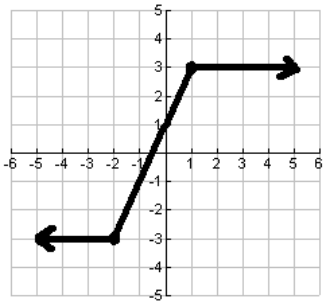
D: _____

R: _____

3. 

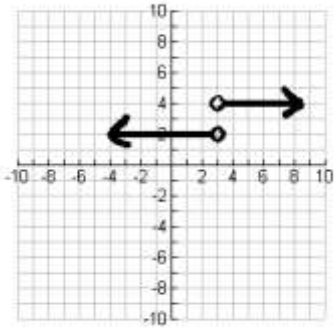
D: _____

R: _____

4. 

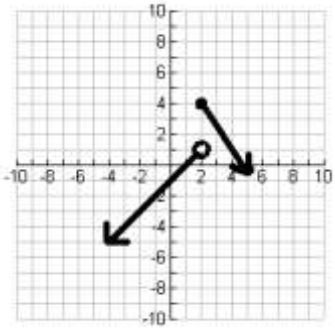
D: _____

R: _____

5. 

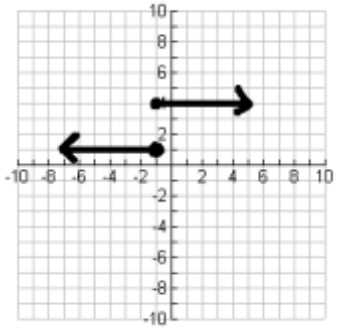
D: _____

R: _____

6. 

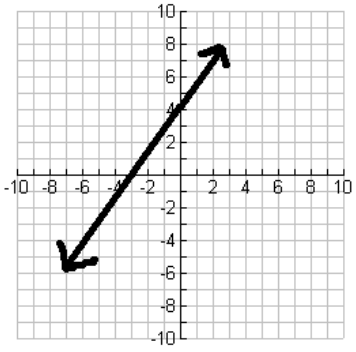
D: _____

R: _____

7. 

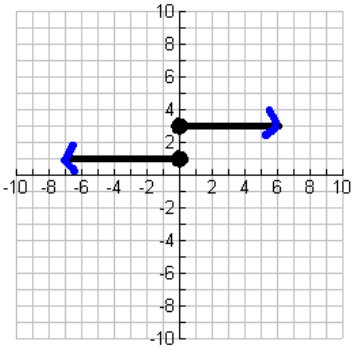
D: _____

R: _____

8. 

D: _____

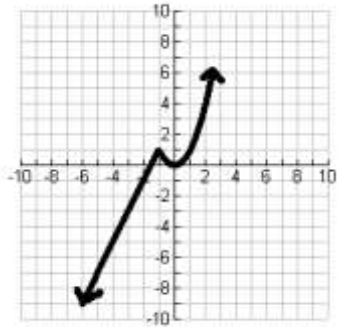
R: _____

9. 

D: _____

R: _____

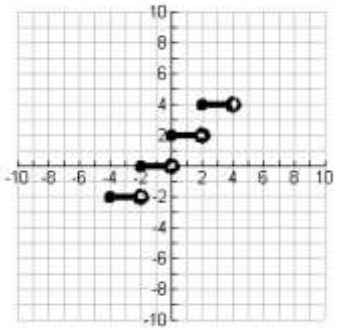
10.



D: _____

R: _____

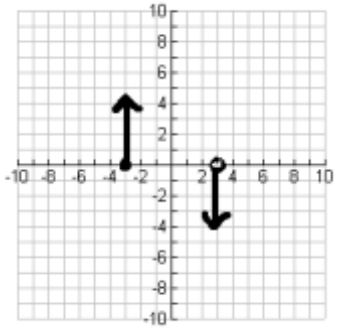
11.



D: _____

R: _____

12.

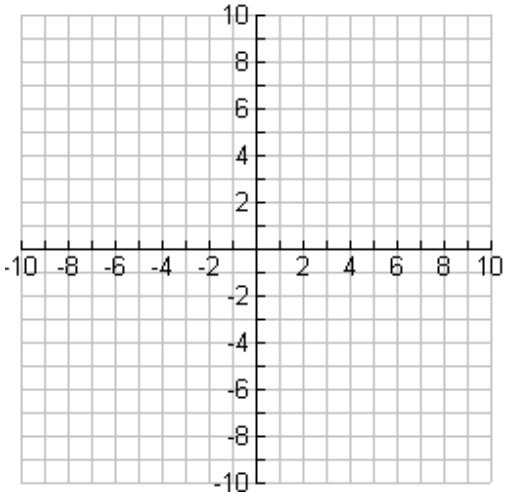


D: _____

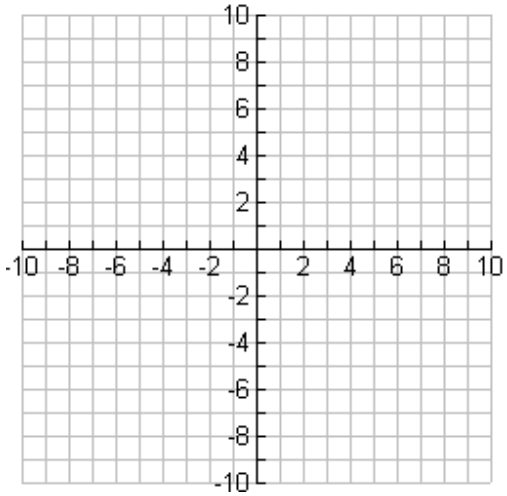
R: _____

II. Graph a function with the following domain and range.

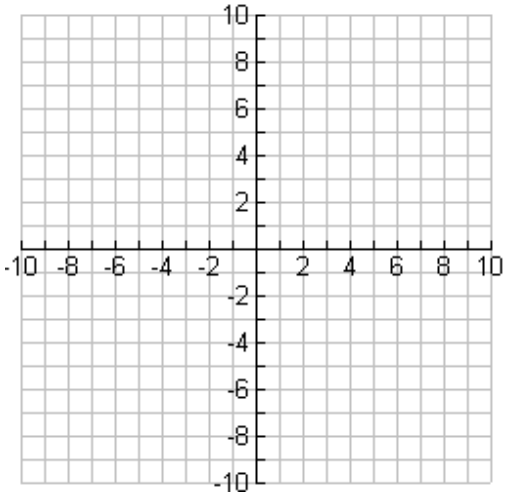
13. Domain: $x \geq 2$
Range: $y \leq 1$



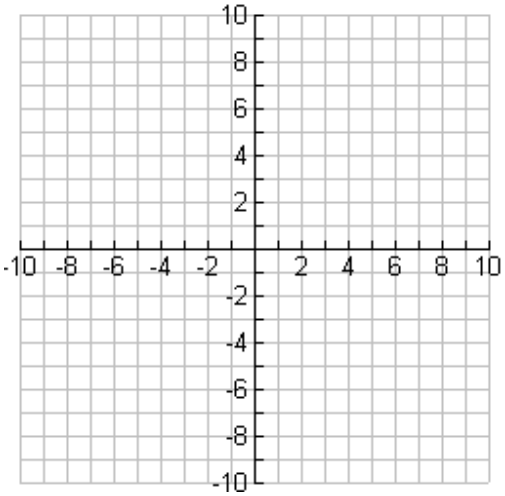
14. Domain: $x \leq -1 \text{ or } x \geq 2$
Range: $y \leq -2$



15. Domain: $-4 < x \leq 7$
Range: $-2 < y \leq 4$



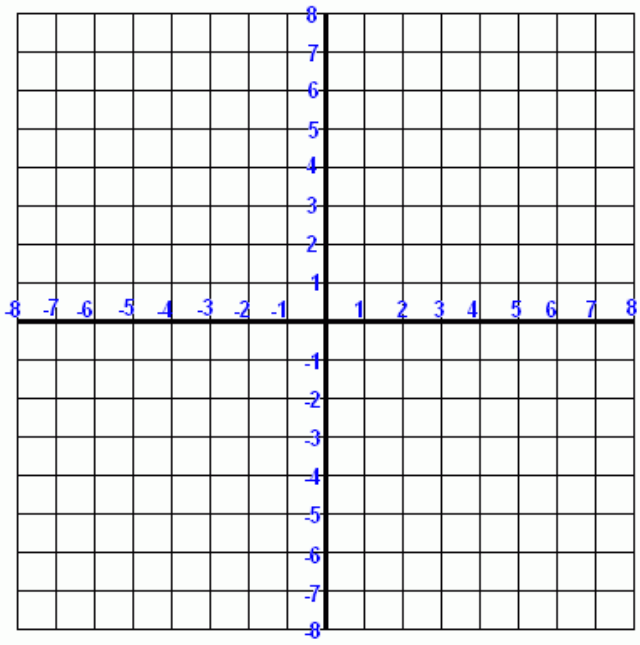
16. Domain: $x \geq 2$
Range: $y < -2 \text{ or } y > 3$



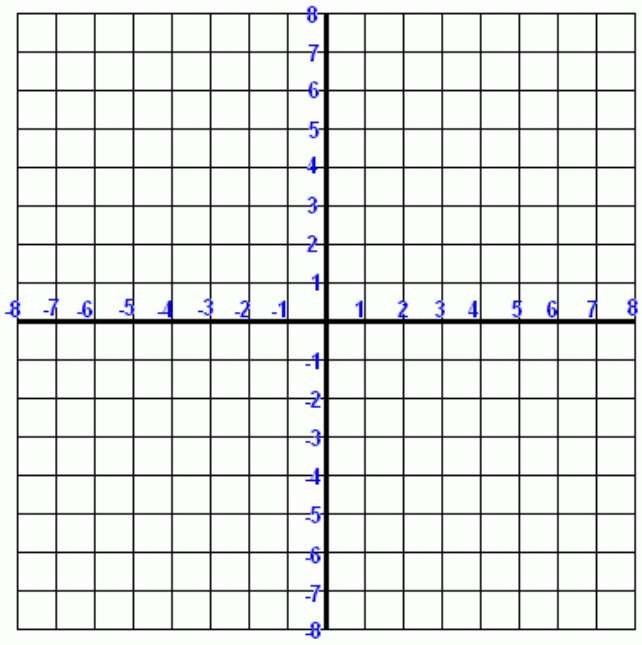
Monday, September 8: Graphing Piecewise Functions

Sketch the piecewise functions. Plot a few points to help sketch.

1) $f(x)=\begin{cases} x+2, & x<0 \\ 2x-3, & x\geq 0 \end{cases}$



2) $f(x)=\begin{cases} x^2-1, & x\leq 0 \\ -2x+3, & x>0 \end{cases}$



3) $f(x)=\begin{cases} \sqrt{x}, & x>0 \\ \frac{2}{3}x-3, & x\leq 0 \end{cases}$

4) $f(x)=\begin{cases} \sqrt{x}+2, & x\geq 0 \\ x^2-2, & x<0 \end{cases}$

5) $f(x)=\begin{cases} 2x, & x<-3 \\ 3, & -3\leq x<1 \\ -x^2, & x\geq 1 \end{cases}$

6) $f(x)=\begin{cases} -2x+3, & x\leq -2 \\ -3, & -2<x<2 \\ \sqrt{x-2}, & x\geq 2 \end{cases}$

7) $f(x)=\begin{cases} \frac{-2}{3}x+4, & x<-3 \\ |x|-1, & -3\leq x<2 \\ (x-2)^2, & x\geq 2 \end{cases}$

8) $f(x)=\begin{cases} 2x, & x\leq -3 \\ |x+1|, & -3<x\leq 0 \\ \sqrt{x}, & 0<x\leq 4 \\ (x-1)^2, & x>4 \end{cases}$

Evaluate without graphing:

9) $f(x)=\begin{cases} 3-x, & x\leq 1 \\ 2x, & x>1 \end{cases}$

Find $f(0)$, $f(1)$, $f(2.5)$

10) $f(x)=\begin{cases} 1, & x<0 \\ \sqrt{x}, & x\geq 0 \end{cases}$

Find $f(-1)$, $f(0)$, $f(5)$