Math 180 – Introduction to Inverse Functions - Section 5.2 **Name_____**

In problems 1 – 4, complete part A only by Wednesday 10/13 – Part (b) will be done in class

Look at the x and y-coordinates on both tables, what do you notice?

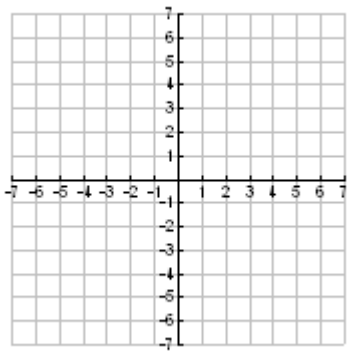
Look at the graphs; what do you notice?

Look at the composition of the functions. What do you notice?

1) A) Complete the tables for the given functions and graph both on the same coordinate system

$f(x)=2x+3$ and $g(x)=\frac{x-3}{2}$

X	$f(x)=2x+3$
-1	
0	
1	
2	



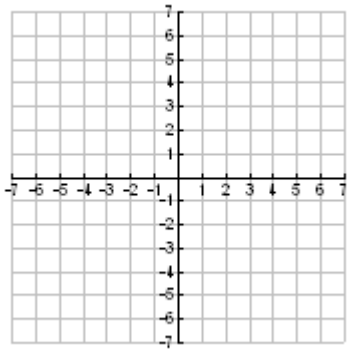
X	$g(x)=\frac{x-3}{2}$
1	
3	
5	
7	

b) Find (fog)(1) c) Find (gof)(2) c) Find $(fog)(x)$ **d**) Find $(gof)(x)$

2) A) Complete the tables for the given functions and graph both on the same coordinate system

$f(x)=x^3+2$ and $g(x)=\sqrt[3]{x-2}$

X	$f(x)=x^3+2$
-2	
-1	
0	
1	
2	

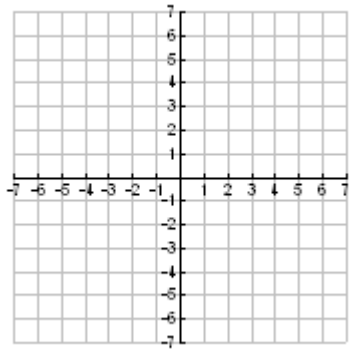


X	$g(x)=\sqrt[3]{x-2}$
-6	
1	
2	
3	
10	

b) Find (fog)(3) c) Find (gof)(1) c) Find $(fog)(x)$ **d**) Find $(gof)(x)$

3) A) Complete the tables for the given functions and graph both on the same coordinate system
$f(x) = x^2 - 4$ when x ≥ 0 and $g(x) = \sqrt{x+4}$

X	$f(x) = x^2 - 4$
0	
1	
2	
3	

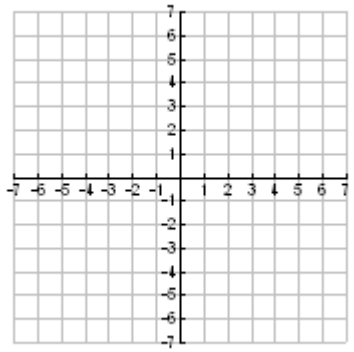


X	$g(x) = \sqrt{x+4}$
-4	
-3	
0	
5	

b) Find (fog)(-3) c) Find (gof)(2) c) Find (fog)(x) **d**) Find (gof)(x)

4) A) Use the given tables of values to graph both functions on the same coordinate system
We don't know the formulas for these functions. We'll define them in class.
You can still graph and solve the composition problems.

X	**F(x) =**
-1	**1/2**
0	**1**
1	**2**
2	**4**



X	G(x) =
1/2	**-1**
1	**0**
2	**1**
4	**2**

b) Find (fog)(1) c) Find (gof)(2)

d) Find (fog)(2) e) Find (gof)(-1)

f) Find (fog)(1/2) g) Find (gof)(0)