Focused Instruction Unit 2- Family of Functions

Learning Targets: This is an organized list of learning targets to help you prepare for the Unit Test. Please rank each topic using the provided scale.

If you are a low rank on a topic you should: look in your notes, do some research on the topic, look in your green book in CHAPTER 4 page 172-236, as a friend who has a higher rank on that topic than you, as a question to the teacher.

Rank yourself and make an example for each Learning target.

Term	I could teach this topic to others	I can do this topic on my own	I can do this topic with some help	I do not understand this topic at all
I can define a function **Page 178**				
I can decide if a function is increasing or decreasing as x values increase or decrease. **Page 175 #3**				
I can use the vertical line test **Page 178 Extra problems that are good are on page 180 Investigation, 181 #1**				
I can find the domain and range of a function given a graph **You must know your parent graphs and the domain and range of these parent graphs. If you**				

know these and your translations, you should be able to sketch a graph to find the new domain and range.			
I can find the domain and range of a function given an equation			
I can evaluate a function with function notation Notes and Examples can be found on Page 179 Extra problems to be worked can be found on page **Page 233 # 2**			
I can do function operations…like adding or subtracting 2 functions **You did homework on these.**			
I can use translations rules to translate a function We spent a lot of class time on this topic. You did a big graphing assignment. You graphed all the translations of the various parent functions. **Page 220**			
I can use translation rules to write the equation of a new function			

given the parent function **Page 220**				
I can do composition of a function **This can be found on page 225**				
I can maximize the volume of an open top box given a single piece of paper (material). This was another major focus. You should be very good at writing any equation to describe this situation.	**Note: You should be able to maximize the volume, write the equation and find the zeros in LESS than 10 minutes**			
I can solve an absolute value equation **Example of this is solving 6=$\lvert x-2 \rvert$**	**Extra Examples:** 18= 3$\lvert 2x-3 \rvert$-24			
I can find the x intercept of any of our 6 parent functions by using algebra or the graphing calculator to solve **0=f(x)** **See the portal for more problems on finding x intercepts**	**Extra Examples:** 0=3(x-2)^3 -4 0 = 2(x-3)^2 -6			
I can find the y intercept of any function. This is done by entering the function into your calculator and **doing VARS(0)** **The notation for this is f(0)**				

Extra Review problems that are good:

Page 234 #4-8

Page 229 #6

Page 229 #2

Page 228 #1