

Name: _____

Fun With Functions

Goal: To make a creative picture using translations of functions.

Procedure:

- You will use a sheet of graph paper to create a picture. This picture will incorporate all of the functions that we have talked about. The functions will all be in reference to a single chosen Cartesian coordinate system.
- Ex: $f(x) = x$, $f(x) = x^2$, $f(x) = x^3$, $f(x) = \sqrt{x}$, $f(x) = \sqrt[3]{x}$, $f(x) = |x|$, $f(x) = \frac{1}{x}$, and $f(x) = c$ where c is a constant.
- In your drawing you must only use functions, but your drawing doesn't have to be a function. (The only non-function you may use is a vertical line, if needed.)
- You have to use at least 7 of the 8 functions stated above. You will need to include transformations in your basic functions in order to appropriately place each piece of your picture on your coordinate plane.
- You must also list the domain and range of each of the functions you have used in the chart provided.
- You will be graded on creativity, accuracy and following directions.
- You must color your picture.
- You may work with 2 other people in class, for a total group of 3.
- The project is due: _____ at the beginning of the period. A late project will be dropped one letter grade for each day it is late. If the project is not turned in at the beginning of class it will be considered late.
- The project will be worth 42 points.
- You must turn in **all** of you work with the picture.
- You must turn in a rough draft with the equations labeled on the picture. Do not label the equations on your final picture. The final picture may be on plain paper, not graph paper.

Good Luck and Have Fun!

