

Written HW5 – MATH 1530 Fall 2020

**Due by 29 September for timely completion credit**

In the following problems, you must do all the following things for full credit (as I did in class): begin with a standard “base function” (you can use Desmos to find what it looks like if you don’t know), have one separate plot for each transformation, have two points that you pick on the “base function” plot that are carried through each transformation, identify the transformation being done on each plot, write the formula for the function being plotted in each plot, and more-or-less correctly draw them (I’m not expecting perfection, but e.g.  $x^2$  should not look like a “V” – things like that).

After you have done your plots by hand, you must attach to the submission a picture made in Desmos (or whatever graphing utility you like) that graphs each function plotted on one plane (as I did in class).

1. Sketch  $5(x + 4)^3 + 2$  (*note: base function here is  $x^3$* )
2. Sketch  $-2(x - 1)^2 - 3$
3. Sketch  $\sqrt{-5x} + 1$