

Written HW2 – MATH 1540 Spring 2023

In this homework you should use function transformations to sketch the graph of the function. A complete answer will look similar to the examples done in class. Complete answers must include a step for each transformation involved, it should start with the “fundamental” function, each plot should be shaped correctly, which transformation is being applied needs to be stated (“vertical shift” or similar), the graph in each plot must be labeled for what it is, and at least two points must be plotted that are carried throughout as the function is transformed.

1. Sketch $f(x) = (x - 5)^2 + 2$
2. Sketch $g(x) = 3\sqrt{2x}$
3. Sketch $\ell(x) = -2(x + 1)^3 - 5$