Sameer Bhatti
CS 5335
HW 7

V1b) The result with the outliers is different than the result in part A because the outliers influence how the plane is fit. Since we use all 100 points to fit the plane, the outliers are included when trying to fit the plane to the points. Part A does not contain outliers so the plane is mostly centered in the middle of the points whereas the plane in Part B is angled towards some of the outliers.

V1c) The RANSAC method produced better results compared to fitting a plane with all the data in Part A. RANSAC is more optimal for when there are outliers in the data since it only needs to sample 3 points to fit a plane instead of fitting a plane to all the points as in Part A. However, RANSAC can get computationally heavy as the number of outliers in a dataset increases. As outliers increase, more iterations would be needed to optimize the algorithm, otherwise the algorithm will terminate with a poor solution. The method in Part A is successful when the points are uniform. Then fitting a plane would fall near the middle and centered around the points. However, this method fails with more outliers as seen in Part B.