

Student Name: \_\_\_\_\_

1.- Consider you have a laser scan of a room (consisting of a million unique 3D points). You want to fit a 3D plane model to the attained point cloud. Assume you only need 3 different points to define a single plane hypothesis, and that 50% of the data are contained within the desired plane. What is the probability of finding the correct plane after 2 RANSAC iterations? (Fractional answers are sufficient)

2. Consider a 2D point in the plane with coordinates  $(x=3, y=2)$ . Considering the polar representation of a line, what are the values of rho for the following scenarios:

- a) A vertical line
- b) A horizontal line
- c) A line with theta equal to 45 degrees