Experiment 1

Name\_\_\_\_\_ Instructor name\_\_\_\_\_

## You must show and explain all work neat and organized to receive credit. Please show each step for calculations. YOU MUST TURN IN THIS SHEET to have your assignment graded.

1. (a) Calculate the mean value for the following experimentally determined numbers: 2.73, 2.58, 2.41, 2.26, and 2.69. All numbers have units of cm. (b) Please define and calculate the standard deviation of the mean for the provided set of measurements. Show detailed calculations. (5 pts)

2. A man notices a vacant lot for sale. He finds the dimensions to be 13.5 m by 45.9 m. If both measurements have an uncertainty of 0.300 m, what are the area of the lot and its uncertainty? Note that uncertainty cannot be more precise than the ara of the lot. (7pts)

4. An interior decorator installs an aquarium that is 0.700 m wide, 6.00 m deep, and 9.00 m long. The uncertainty of each measurement is 0.0200 m, what is the volume of the aquarium and **percent uncertainty** in the volume? (8 pts)