1. Determine whether the numerical value is a parameter or a statistic. Explain your reasoning.

   A recent survey by the alumni of a major university indicated that the average salary of 7500 of its 200,000 graduates was $95,000.

2. Identify the data set' s level of measurement (circle).
   - hair color of women on a high school tennis team

     A) nominal B) ordinal C) interval D) ratio

   - numbers on the shirts of a girl's soccer team

     A) nominal B) ordinal C) interval D) ratio

   - ages of students in a statistic class

     A) ratio B) ordinal C) interval D) nominal

   - temperatures of 73 selected refrigerators

     A) interval B) ordinal C) nominal D) ratio

   - number of milligrams of tar in 85 cigarettes

     A) ratio B) ordinal C) interval D) nominal

3. What is replication in an experiment? Why is it important? What is pseudoreplication?

4. Identify the experimental units and treatments used in the experiment.

   A medical researcher center wants to test the effectiveness of a new diabetes medication. The company identifies 82 adults suffering from a similar form of diabetes. The subjects are randomly assigned to two groups. One group is given a medication and the other is given a placebo that looks exactly like the medication. After three months, the subjects' symptoms are studied and compared.

5. Explain the difference between a census and a sampling and describe the advantages and disadvantages of each.

6. Weights, in grams, of 25 male Mariana fruit bats from a single island.

566	607	603	576	493	581	562	549	637	620
524	556	518	551	421	566	534	551	507	617
553	541	550	602	611	593	592	500	560	575
588	547	667	534	472	532	590	583	513	566

   a. Construct a relative frequency histogram of the data (can be drawn by hand).
   b. Calculate and plot the mean and median value.
   c. Calculate the variance, standard deviation, and coefficient of variation.
   d. Construct a box plot (by hand is fine) of the data and calculate the interquartile range.
   e. Identify any outliers in the data set.