

Quiz (20% of grade; 40 points) – you have 60 minutes to complete this quiz.

- A. **Calculations.** Use **pencil only** and do all of the questions below. Use the quiz paper as your answer sheet and show all appropriate work. Use the following data set for all of the calculations, and circle your answers for the calculations unless instructed otherwise. (31 points)

A group of researchers determined how many subscription licenses an academic library had for a sample of chemistry, biochemistry, and biomechanics journals. Here are the data the researchers collected:

1, 0, 3, 3, 5, 5, 1, 0, 2, 1, 3, 5, 0, 0, 2.

1. What is the unit of analysis in this study? (2 points)
2. What is the variable measured? (2 points)
3. Generate the frequency distribution for this data set using class examples as models; do not circle the frequency distribution. (6 points)
4. Calculate:
the mean (2 points)

the median (3 points)

5. What is the standard deviation of this data set? (5 points)
6. Generate a box plot for the observations; do not circle the plot. (6 points)
7. What is the interquartile range of these data? (5 points)
- B. **Concepts.** Use **pen only**, and do all of the questions below. Use the quiz paper as your answer sheet, using the space provided as an indication of how long an answer should be. (9 points)
1. What is a frequency polygon? Why do we use this technique in statistical analysis? (3 points)
2. What does it mean to say that a distribution is skewed? (3 points)
3. Which is the more serious form of error, bias or noise? Why? (3 points)

Do not write below this line.