Quiz 04

1. (8 pts) Please write your lab number at the top right corner of this quiz as well as your signature. On the back of this quiz, please write your name.

   For questions 2 and 3, consider the following quantity called standard deviation of x:

$$\sigma_x = \sqrt{\frac{1}{N-1}\sum_{i=1}^{N}(x_i - \bar{x})^2} \tag{1}$$

   where $x_1, x_2, \ldots, x_N$ are the values of x for N measurements. Suppose you made the measurement of x five times and obtained the results 56, 57, 56, 58, 57 (for convenience, any units were omitted).

2. (16 pts) Calculate σ_x. Show all your work.

3. (8 pts) Report your final result x_{exp} appropriately.

4. (8 pts) Briefly describe what we are doing for today's experiment.