Class Time:

Names:

F Distribution and ANOVA: ANOVA Lab 1

Student Learning Outcome:

- The student will conduct a simple ANOVA test involving three variables.

Collect the Data

1. Record the price per pound of 8 fruits, 8 vegetables, and 8 breads in your local supermarket.

Fruits	Vegetables	Breads

2. Explain how you could try to collect the data randomly.

Analyze the Data and Conduct the Hypothesis Test

1. Compute the following:

Fruit:

- $\bar{x}$ = _____
- s_x = _____
- n = _____

Vegetable:

- $\bar{x}$ = _____
- s_x = _____
- n = _____

Bread:

- $\bar{x}$ = _____
- s_x = _____
- n = _____

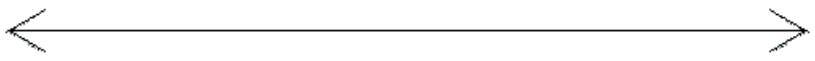
2. Find the following

   a. df(num) = _____
   b. df(denom) = _____

3. State the approximate distribution for the test.

4. Test statistic: F = _____

5. Sketch a graph of this situation. CLEARLY, label and scale the horizontal axis and shade the region(s) corresponding to the p-value.



6. Test at $\alpha = 0.05$. State your decision and conclusion.

    a. Decision: Why did you make this decision?

    b. Conclusion (write a complete sentence).

    c. Based on the results of your study, is there a need to further investigate any of the food groups' prices? Why or why not?