

Do not write your name on the assignment. Write your name only on the back of this sheet of paper and staple your answers on the front of this sheet of paper. Failure to follow these directions will cost you 1 point on the assignment.

This assignment covers chapter 6. Like last semester, I will not hold you responsible for the mathematics in the chapter. I will hold you responsible for understanding how to do regressions on the computer and how to interpret them. For the questions that involve computer work, e-mail me the work as an attachment.

Until break, all assignments are due on Fridays. The week after break will have an assignment due on Tuesday and the test on Friday.

1) (50 points) The data below shows the quantity of xylophones (X) demanded as a function of the price of xylophones, the price of yams, and the advertising done by the xylophone manufacturer. Run a regression that will estimate the functional relationship. Write the resulting equation that estimates the demand function. How accurate is the equation at predicting the quantity of xylophones demanded? Which variables are significant? Would you do advertising if you were this firm? For all parts, explain how you came to those conclusions.

Observation	Qx	Px	Py	Ads
1	96	12	12	1
2	86	13	14	3
3	88	15	16	2
4	91	13	11	4
5	84	14	12	2
6	95	12	17	3
7	85	11	9	5
8	94	9	7	7
9	84	16	15	5
10	81	17	17	3
11	104	8	11	7
12	87	19	17	9
13	97	3	2	3
14	103	5	9	5
15	86	12	14	1
16	101	4	5	0
17	100	5	7	6
18	96	14	17	3
19	83	22	19	1
20	91	12	13	7

2) (20 points) Enter the data into the computer and have it find the covariance between the price of xylophones and the price of yams in the data for question #1. What does that tell us? Will this cause a problem with multicollinearity? Why do you say this?

3) (30 points) Could there be a problem with autocorrelation in question #1? For each of the causes of autocorrelation listed on pages 221 and 222, explain whether or not you think that problem exists. It is possible that one or more are not applicable. If so, then explain why it is not.