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Prog. Inst. Due 6/13;  
Final report due at start  
of 6/25 class Suppose you

had a programmer working for you who knew how to run SAS or Excel programs (but could not give you statistical advice). Write out what computer runs you would request this programmer do after you read this assignment but before you see any computer output. (Note that you anticipate asking for additional computer runs before completing this assignment). Include a copy with your final report.

You are to work on this assignment without the assistance of others without exception. You may use your class notes, class text, homework materials and videotapes without citation. You must cite specifically in detail, any other assistance given or received, (including assistance by me) You must write, sign and date: *I have neither given nor received communication about this project with the following sole exceptions:*

Time: You must keep track of total time spent on this assignment, and also list the three separate components: pre-writeup but not doing computer work, computer work, and writeup. I would hope that you would finish this assignment in about three hours. **You may not spend more than seven hours on this assignment.\*** The time spent on each of these components, and total time must be clearly listed.

**Scenario:** I just received some data last night that my assistant collected on a random sample of profit measures on 25 consecutive days. The data consists of profit (in \$100) and two covariates, (an independent variables), material A (in gallons) and material B (in lbs.). Assume I will be away for a week. When I come back, I want your report analyzing how to predict profit on my desk. I will then run to the Board meeting. I hope to have time to read your Executive summary and recommendation (if not, I may just read it as my presentation). If I have more time, I will review your enhanced explanation of your analysis and backup materials. Don't embarrass me!

I will be asked to give a 90% confidence interval for the predicted profit on day 26 when Material A = 35 gallons and Material B = 95 lbs. Include the formula and substitutions for calculating the CI's.

**Report:** The Executive Summary and Analysis should be at most three pages. It will be followed by a Table of Contents of the Appendix, the first page of which will include citation information and hours spent. It is strongly recommended that you use the format that I have given you in the several reports that we have covered in class. It will start with a brief executive summary which should include a summary of the problem, your recommended

model, information about the requested predictions and confidence intervals and any limitations or concerns that you may have that I should use in a brief presentation so I don't overstate the accuracy of the results. Following the Executive summary (which should not be longer than 1/2 a page), you should mention to me what analyses you did and your conclusions with reference to the appendix backup materials. The appendix should have a table of contents and all exhibits should be neatly labeled. Don't show me all your fumbblings and ramblings, just show me a straightforward path through what you did that was significant so that I have enough information to decide on whether or not I concur with your analysis. The last two pages will be the programmer's instructions followed by this page.

Use the format of the sample reports given out in class. Do not put a cover on this report. Your name and seat number should appear just above the executive summary on the first page.

On the first page of the appendix, give me the time spent on this project, both total and by the categories mentioned above. Also, give a clear statement of any materials and/or assistance that needs to be cited on this page. Include a table of contents for your appendix which details the computer output of the appendix. Make specific reference to page numbers of this output in your report. Use  $\alpha=0.05$ . Check that your data has been entered accurately.

**THE DATA:**

Day	Profit	A	B
1	162	36.2	70.9
2	156.1	36.2	69.5
3	195.1	30.2	70.9
4	204.8	57.2	69.5
5	255.8	44	68.1
6	184.4	61.4	68.1
7	172.4	36.2	68.1
8	223.2	36.2	68.1
9	129.6	48.2	70.9
10	285.2	42.2	68.1
11	155.6	36.2	66.7
12	258.6	36.2	68.1
13	227.3	39.2	68.1
14	238.7	33.2	
15	215.8	62	75.1
16	173	39.2	73.7
17	287.7	51.2	70.9
18	205.6	55.4	73.7
19	179.3	39.2	70.9
20	312.4	30.2	73.7
21	291.3	45.2	75.1
22	255.6	62	76.5
23	217.8	45.2	73.7
24	324.4	42.2	75.1
25	268.8	39.2	73.7

Note that the observation on day 14 has a missing entry. You should exclude this observation from the analysis.

\*You need not count time spent before 6/20