assignment due (by 11:59 p.m.): mon, 10 feb

directions: complete the exercises listed below. include only relevant computer output for each exercise in order, and include as an appendix any computer code you used for the exercises. you should indicate in the appendix which portions of the code address which exercise. data are available on the course text cd (and course text website; see link on course website). some starter sas code is provided on the class website (just to create the correct data sets in sas). you may discuss the exercises with other students and with the instructor, but the work you turn in must be your own. note that neatness and format (including code in appendix) will contribute 5 points to the total score. this assignment will be graded out of 63 points.

exercises: [for each, assume (and don’t check) that model assumptions are met.]

1. (4 points) text problem 2.3

2. (6 points) text problem 2.4a,c (for part c, report the p-value and conclusion, and state how this supports the result in part a.)

3. (6 points) text problem 2.10

4. (16 points) text problem 2.13 [note that the confidence band in part d is the working-hotelling interval for act=28; see sample construction on page 2 of handout 4.a.]

5. (6 points) text problem 2.17

6. (16 points) text problem 4.27 (y = length of stay, x = infection risk) [for parts c-d, you will want to add four “dummy” observations to the data, with x=2,3,4,5; so g = 4. report both working-hoteling and bonferroni intervals, and specify which is tighter (“more efficient”).]

7. (4 points) referring to text problem 4.27, and using your fitted model in exercise 6, if a hospital wants to reduce its average length of stay to 9 days, what is a point estimate of the infection risk needed to achieve this goal?