

Fundamentals of Data Analysis: Assignment #13

Deadline: 2/2/2004 (Monday)

Please post to the mailbox next to the IS management office (2nd floor of IS building)

1. There are four major nursing schools preparing nurses to work in a city's hospitals. You want to determine whether the job-performance rating is independent of the school the nurse attended, a random sample of 500 nurses is chosen from the hospitals. Test the hypothesis that two variables (school and performance rate) are independent, using a significance level $\alpha = 0.01$.

Remark: Note that the numbers of the nurses are different among the schools.

School	A	B	C	D
Good	15	90	10	35
Average	80	30	100	90
Poor	5	30	15	0

2. An elementary school plans to begin to use the calculator to supplement mathematics learning. To study the change in attitude of the children, a researcher randomly chooses 10 mothers in this school and asks them to fill out an appropriate attitude scale in September and in December. Run an appropriate non-parametric test to test whether there is a change in attitude during the course using $\alpha = 0.01$.

	1	2	3	4	5	6	7	8	9	10
September	5	12	8	10	9	3	11	10	15	7
December	4	15	12	15	11	7	19	20	13	10

3. The producer of a Restaurant Guide wants to determine whether there is a perceived difference in the quality of food and service at two restaurants. Eight and seven customers completed a questionnaire for Restaurant A and B, respectively, and the total scores are as follows. Run an appropriate non-parametric analysis at $\alpha = 0.05$.

Restaurant A	20	18	22	17	19	15	23	25
Restaurant B	10	14	16	8	9	11	12	

4. Write your comments and requests on this lecture (if any).

END.