

Homework

Problem

- The faculty members of a student-nursing program wanted to increase the sensitivity of their students to the psychological trauma experienced by hospitalized patients. They randomly assigned each of 30 students to one of three groups: 1) receive sensitivity training; 2) undergo transactional analysis; or 3) receive no training. One week after the training period ended, patients attended by these students completed a questionnaire designed to measure the students' sensitivity. High scores indicate high sensitivity. Analyze the data with ANOVA. What decision should the faculty make?

Sensitivity Training	Transactional	Analysis Control
18	16	14
17	15	14
15	15	13
12	15	12
12	13	12
11	12	12
9	10	11
8	8	10
6	7	9
5	4	8

- You are conducted a study investigating whether or not performance on math problems is effected by the instructor labeling the problems as "easy", "moderately difficult", or "very difficult". You collected data from total of 15 participants (5 in each of the 3 groups described above), and through an ANOVA found a significant effect. The ANOVA table is listed below. Using a Tukey test, determine which groups were significantly different from each other.

Source	SS	df	MS	F
Between	63.33	2	31.67	4.52
Within	84.00	12	7.00	

Mean problems correct: group 1 (labeled "easy") = 8.00

Mean problems correct: group 2 (labeled "moderately difficult") = 6.00

Mean problems correct: group 3 (labeled "very difficult") = 3.00

- You recently conducted a research project examining creativity scores and age. You find that there was a significant difference between the creativity scores of different aged children. You tested 5 children in each of 4 different age groups (4-, 6-, 8-, and 10-years old). You wish to find out where the significant differences lie and decide to conduct a Neuman-Kuels post-hoc test.

Source	SS	df	MS	F
Between	134.80	3	44.93	17.08
Within	42.00	16	2.63	

Mean creativity score, group 1 (4-year olds) = 4.40

Mean creativity score, group 2 (6-year olds) = 10.80

Mean creativity score, group 3 (8-year olds) = 9.40

Mean creativity score, group 4 (10-year olds) = 5.80