

## Problems for fun and practice!

### ANOVA (One-way)

1. Suppose that 30 subjects were randomly assigned to three groups and the subjects in each group received a different treatment. The subjects' scores are as follow:

<u>Group I</u>	<u>Group II</u>	<u>Group III</u>
3	12	7
5	13	9
8	11	10
5	14	4
6	10	6
9	8	10
10	15	13
8	17	12
5	10	13
11	20	16

Hint:  $s^2 =$             6.67            13.11            13.33

2. Suppose that 22 subjects were randomly assigned to four groups and the subjects in each group received a different treatment. The subjects' scores are as follows:

<u>Group I</u>	<u>Group II</u>	<u>Group III</u>	<u>Group IV</u>
1	1	3	7
9	5	7	9
4	4	5	12
5	7	8	16
7	3	7	
4	4		
	4		

Hint:  $s^2 =$             7.6            3.3            4            15.33

3. A researcher for a large food products company tested the comparative effectiveness of three different appeals (tastes good, rich and creamy, no preservatives) for persuading shoppers to buy its brand of salad dressing. The percentage of salad dressing sales in nine supermarkets accounted for by their brand is the dependent variable. Is there a significant difference between these appeals?

	Tastes Good	Rich and Creamy	No Preservatives
	15	16	22
	16	19	23
	17	20	23
	18	21	25
	19	21	26
	20	21	27
	21	22	29
	22	23	29
	23	26	30
Hint: $s_2 =$	7.5	7.5	8.75