

**Statistics 225**  
**Practice problems for simple ANOVA**

1. A researcher tested the effects of self-interests on persuasion. Subjects heard messages that were either consistent, against, or not related to their interests and indicated their agreement with the message. Conduct an ANOVA on the following data and determine if interest relevance significantly influences agreement. Test at  $\alpha = .05$ .

	relevance to interests		
	consistent	inconsistent	unrelated
	6	8	6
	2	9	5
	3	11	7
	1	7	7
	2	10	5
	4	9	6

2. Conduct an ANOVA to test whether self-esteem is related to tendency to conformity to group demands. Below are conformity ratings for the three levels of self esteem. Test at  $\alpha = .05$ .

	self esteem		
	low	moderate	high
	9	4	0
	11	6	3
	7	3	3
	5	7	0
	10	5	2
	6	5	4

3. (bonus) The following table presents the results of an ANOVA from an experiment comparing four treatment conditions with a sample of  $n = 10$  in each group. Complete the missing values in the table.

source	df	ss	ms	f
between			15	
within		108		
total				

4. Conduct an ANOVA for the scores for the following 4 groups. Do these groups differ significantly from one another at  $\alpha = .05$ ?

group1	group2	group3	group4
2	5	5	7
4	6	5	9
3	7	11	11