1. A researcher wished to compare the effect of the rate of stepping on heart rate in a step-aerobics workout. A collection of 30 adult volunteers was randomly divided into three groups of ten subjects each. Each group did a standard step-aerobics workout with Group 1 at a low rate of stepping, Group 2 at a medium rate of stepping, and Group 3 at a rapid rate. The mean heart rate at the end of the workout for all subjects was determined in beats per minute. Assume the data for the three groups are independent and approximately normal.

Group	**Mean HR**	**Std. Dev. HR**
1	95.7	12.606
2	104.11	8.442
3	122.4	20.823

   1. Construct an ANOVA table with each column labeled by sum square, mean square, df, F-statistics, p-value.
   2. Is ANOVA analysis appropriate for this data? Why?

2. A researcher tested pain threshold for women with different natural hair colors using pain sensitivity test score as the response. Conduct a one-way ANOVA analysis using the data provided below. Check the assumptions for the ANOVA model.

Col	n	Mean	Std Err
Lt-Blond	5	59	3.8
Dk-Blond	5	51	4.2
Lt-Brunette	5	41	2.6
Dk-Brunette	4	38	4.7