Appendix E: Two-Way Analysis of Variance Questions Sheet

1. For each treatment, generate the mean and standard deviation of the texture scores.

2. Generate an ANOVA summary table and an interaction plot. Using the appropriate generated *P*-value, make a conclusion regarding whether Flavor of gum and Piece of gum interact to affect the mean Texture score. Does your conclusion agree with what your graph shows?

3. If you concluded that Flavor of gum and Piece of gum interact to affect the mean Texture score, use a multiple comparisons procedure to compare all pairs of the treatment means.

4. If you did not conclude that Flavor of gum and Piece of gum interact to affect the mean Texture score, use the appropriate generated *P*-value to make a conclusion regarding whether the treatment means are equal. If you conclude that the treatment means are not equal, conduct tests of two null hypotheses that the mean texture score is the same at each level of Flavor of gum and at each level of Piece of gum. If the test for either Flavor or Piece of gum is significant, compare the pair of means corresponding to the levels of the significant factor.