**Version: F Statistician: Daniel Chartrand**

**Directions:**

You may have a pencil, a calculator, and your R output document produced from the **LaysanFinch.csv** data on your desk. All other materials should be fully stored out of sight and your computer should be turned off.

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**Questions:**

1. **[3pts]** Identify what type of variable each of the following is: weight, bklen, and loc.

2. **[5pts]\*** Perform a thorough EDA for sternum length.

3. **[2pts]\*** Perform a thorough EDA for the location variable.

4. **[5pts]\*** Perform a thorough EDA for the relationship between tarsus length and length of the lower mandible.

5a. **[2pts]\*** Interpret the slope of the linear regression that you performed.

b. **[2pts]** Predict the weight of a finch if the beak length equals the median beak length.

c. **[2pts]** What is the residual if the weight of a finch is 25 and the beak length is 1.20.

d. **[2pts]** What proportion of the total variability in weight is explained by knowing the beak length?

6. **[15pts]** Test at the 5% level that the distribution of individuals into the three locations differs between male and female finches.

7. **[15 or 17 pts]** Test at the 5% level that the mean sternum length is different between male and female finches.

8. **[8 pts]\*** Describe the importance of statistics (as a field of study or a collection of methods). Among other things make sure you describe the two major goals of statistics, identify at least three major concepts or ideas of statistics, and identify how some of the methods that you have learned this semester illustrate or are related to why you think statistics is important.

**Version: F Statistician: Jared Hester**

**Directions:**

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**Questions:**

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2. **[5pts]\*** Perform a thorough EDA for sternum length.

3. **[2pts]\*** Perform a thorough EDA for the location variable.

4. **[5pts]\*** Perform a thorough EDA for the relationship between tarsus length and length of the lower mandible.

5a. **[2pts]\*** Interpret the slope of the linear regression that you performed.

b. **[2pts]** Predict the weight of a finch if the beak length equals the median beak length.

c. **[2pts]** What is the residual if the weight of a finch is 25 and the beak length is 1.20.

d. **[2pts]** What proportion of the total variability in weight is explained by knowing the beak length?

6. **[15pts]** Test at the 5% level that the distribution of individuals into the three locations differs between male and female finches.

7. **[15 or 17 pts]** Test at the 5% level that the mean sternum length is different between male and female finches.

8. **[8 pts]\*** Describe the importance of statistics (as a field of study or a collection of methods). Among other things make sure you describe the two major goals of statistics, identify at least three major concepts or ideas of statistics, and identify how some of the methods that you have learned this semester illustrate or are related to why you think statistics is important.

**Version: F Statistician: Hunter Holman**

**Directions:**

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**Questions:**

1. **[3pts]** Identify what type of variable each of the following is: weight, bklen, and loc.

2. **[5pts]\*** Perform a thorough EDA for sternum length.

3. **[2pts]\*** Perform a thorough EDA for the location variable.

4. **[5pts]\*** Perform a thorough EDA for the relationship between tarsus length and length of the lower mandible.

5a. **[2pts]\*** Interpret the slope of the linear regression that you performed.

b. **[2pts]** Predict the weight of a finch if the beak length equals the median beak length.

c. **[2pts]** What is the residual if the weight of a finch is 25 and the beak length is 1.20.

d. **[2pts]** What proportion of the total variability in weight is explained by knowing the beak length?

6. **[15pts]** Test at the 5% level that the distribution of individuals into the three locations differs between male and female finches.

7. **[15 or 17 pts]** Test at the 5% level that the mean sternum length is different between male and female finches.

8. **[8 pts]\*** Describe the importance of statistics (as a field of study or a collection of methods). Among other things make sure you describe the two major goals of statistics, identify at least three major concepts or ideas of statistics, and identify how some of the methods that you have learned this semester illustrate or are related to why you think statistics is important.

**Version: F Statistician: Bailey Riva**

**Directions:**

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**Questions:**

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2. **[5pts]\*** Perform a thorough EDA for sternum length.

3. **[2pts]\*** Perform a thorough EDA for the location variable.

4. **[5pts]\*** Perform a thorough EDA for the relationship between tarsus length and length of the lower mandible.

5a. **[2pts]\*** Interpret the slope of the linear regression that you performed.

b. **[2pts]** Predict the weight of a finch if the beak length equals the median beak length.

c. **[2pts]** What is the residual if the weight of a finch is 25 and the beak length is 1.20.

d. **[2pts]** What proportion of the total variability in weight is explained by knowing the beak length?

6. **[15pts]** Test at the 5% level that the distribution of individuals into the three locations differs between male and female finches.

7. **[15 or 17 pts]** Test at the 5% level that the mean sternum length is different between male and female finches.

8. **[8 pts]\*** Describe the importance of statistics (as a field of study or a collection of methods). Among other things make sure you describe the two major goals of statistics, identify at least three major concepts or ideas of statistics, and identify how some of the methods that you have learned this semester illustrate or are related to why you think statistics is important.

**Version: F Statistician: Zachary Ruley**

**Directions:**

You may have a pencil, a calculator, and your R output document produced from the **LaysanFinch.csv** data on your desk. All other materials should be fully stored out of sight and your computer should be turned off.

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**Questions:**

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2. **[5pts]\*** Perform a thorough EDA for sternum length.

3. **[2pts]\*** Perform a thorough EDA for the location variable.

4. **[5pts]\*** Perform a thorough EDA for the relationship between tarsus length and length of the lower mandible.

5a. **[2pts]\*** Interpret the slope of the linear regression that you performed.

b. **[2pts]** Predict the weight of a finch if the beak length equals the median beak length.

c. **[2pts]** What is the residual if the weight of a finch is 25 and the beak length is 1.20.

d. **[2pts]** What proportion of the total variability in weight is explained by knowing the beak length?

6. **[15pts]** Test at the 5% level that the distribution of individuals into the three locations differs between male and female finches.

7. **[15 or 17 pts]** Test at the 5% level that the mean sternum length is different between male and female finches.

8. **[8 pts]\*** Describe the importance of statistics (as a field of study or a collection of methods). Among other things make sure you describe the two major goals of statistics, identify at least three major concepts or ideas of statistics, and identify how some of the methods that you have learned this semester illustrate or are related to why you think statistics is important.

**Version: F Statistician: Kaitlyn Tapper**

**Directions:**

You may have a pencil, a calculator, and your R output document produced from the **LaysanFinch.csv** data on your desk. All other materials should be fully stored out of sight and your computer should be turned off.

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**Questions:**

1. **[3pts]** Identify what type of variable each of the following is: weight, bklen, and loc.

2. **[5pts]\*** Perform a thorough EDA for sternum length.

3. **[2pts]\*** Perform a thorough EDA for the location variable.

4. **[5pts]\*** Perform a thorough EDA for the relationship between tarsus length and length of the lower mandible.

5a. **[2pts]\*** Interpret the slope of the linear regression that you performed.

b. **[2pts]** Predict the weight of a finch if the beak length equals the median beak length.

c. **[2pts]** What is the residual if the weight of a finch is 25 and the beak length is 1.20.

d. **[2pts]** What proportion of the total variability in weight is explained by knowing the beak length?

6. **[15pts]** Test at the 5% level that the distribution of individuals into the three locations differs between male and female finches.

7. **[15 or 17 pts]** Test at the 5% level that the mean sternum length is different between male and female finches.

8. **[8 pts]\*** Describe the importance of statistics (as a field of study or a collection of methods). Among other things make sure you describe the two major goals of statistics, identify at least three major concepts or ideas of statistics, and identify how some of the methods that you have learned this semester illustrate or are related to why you think statistics is important.

**Version: F Statistician: Matthew Dalton**

**Directions:**

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**Questions:**

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2. **[5pts]\*** Perform a thorough EDA for sternum length.

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4. **[5pts]\*** Perform a thorough EDA for the relationship between tarsus length and length of the lower mandible.

5a. **[2pts]\*** Interpret the slope of the linear regression that you performed.

b. **[2pts]** Predict the weight of a finch if the beak length equals the median beak length.

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d. **[2pts]** What proportion of the total variability in weight is explained by knowing the beak length?

6. **[15pts]** Test at the 5% level that the distribution of individuals into the three locations differs between male and female finches.

7. **[15 or 17 pts]** Test at the 5% level that the mean sternum length is different between male and female finches.

8. **[8 pts]\*** Describe the importance of statistics (as a field of study or a collection of methods). Among other things make sure you describe the two major goals of statistics, identify at least three major concepts or ideas of statistics, and identify how some of the methods that you have learned this semester illustrate or are related to why you think statistics is important.

**Version: F Statistician: Elinor Frank**

**Directions:**

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**Questions:**

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2. **[5pts]\*** Perform a thorough EDA for sternum length.

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**Version: F Statistician: Samantha Harrington**

**Directions:**

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**Questions:**

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4. **[5pts]\*** Perform a thorough EDA for the relationship between tarsus length and length of the lower mandible.

5a. **[2pts]\*** Interpret the slope of the linear regression that you performed.

b. **[2pts]** Predict the weight of a finch if the beak length equals the median beak length.

c. **[2pts]** What is the residual if the weight of a finch is 25 and the beak length is 1.20.

d. **[2pts]** What proportion of the total variability in weight is explained by knowing the beak length?

6. **[15pts]** Test at the 5% level that the distribution of individuals into the three locations differs between male and female finches.

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**Version: F Statistician: Earl Kraft**

**Directions:**

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4. **[5pts]\*** Perform a thorough EDA for the relationship between tarsus length and length of the lower mandible.

5a. **[2pts]\*** Interpret the slope of the linear regression that you performed.

b. **[2pts]** Predict the weight of a finch if the beak length equals the median beak length.

c. **[2pts]** What is the residual if the weight of a finch is 25 and the beak length is 1.20.

d. **[2pts]** What proportion of the total variability in weight is explained by knowing the beak length?

6. **[15pts]** Test at the 5% level that the distribution of individuals into the three locations differs between male and female finches.

7. **[15 or 17 pts]** Test at the 5% level that the mean sternum length is different between male and female finches.

8. **[8 pts]\*** Describe the importance of statistics (as a field of study or a collection of methods). Among other things make sure you describe the two major goals of statistics, identify at least three major concepts or ideas of statistics, and identify how some of the methods that you have learned this semester illustrate or are related to why you think statistics is important.

**Version: F Statistician: Dylan Thooft**

**Directions:**

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4. **[5pts]\*** Perform a thorough EDA for the relationship between tarsus length and length of the lower mandible.

5a. **[2pts]\*** Interpret the slope of the linear regression that you performed.

b. **[2pts]** Predict the weight of a finch if the beak length equals the median beak length.

c. **[2pts]** What is the residual if the weight of a finch is 25 and the beak length is 1.20.

d. **[2pts]** What proportion of the total variability in weight is explained by knowing the beak length?

6. **[15pts]** Test at the 5% level that the distribution of individuals into the three locations differs between male and female finches.

7. **[15 or 17 pts]** Test at the 5% level that the mean sternum length is different between male and female finches.

8. **[8 pts]\*** Describe the importance of statistics (as a field of study or a collection of methods). Among other things make sure you describe the two major goals of statistics, identify at least three major concepts or ideas of statistics, and identify how some of the methods that you have learned this semester illustrate or are related to why you think statistics is important.

**Version: F Statistician: Simone Webinger**

**Directions:**

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**Questions:**

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b. **[2pts]** Predict the weight of a finch if the beak length equals the median beak length.

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