STAT 101 Exam #1 Form C

Name (print): ———————————————————— Section:

February 24th, 2020

Instructions

You have 50 minutes to complete this exam. There are a total of 63 points to earn on the exam along with 2 bonus points. Read the questions carefully and completely and give complete answers to all questions. Partial credit will be given where it is deserved.

You are allowed to use only a pencil and a calculator to complete this exam. All necessary information will be provided in the question space. A formula sheet is attached at the back.

Show your work. Draw pictures, write formulas and equations, and don't forget units where needed. **Good luck!**

Problem 1. (2 points) Which of the following are quantitative variables? Circle all correct answers.

a) Education in number of years

b) Age in years

c) Highest level of education achieved

d) Pizza preference

e) Income in terms of Socio-economic class

Problem 2. (2 points) Which of the following are categorical variables? Circle all correct answers.

a) Test Scores

b) Eye Colour

c) Height

d) Political Party Identification

e) Distance in miles

Problem 3. (2 points) What type of variable can be used in mathematical calculations?

a) Categorical Variables

b) Response Variables

c) Ordinal Variables

d) Lurking Variables

e) Quantitative Variables

Problem 4. (2 points) Which type of data visualization is good for comparing a quantitative variable across different categories?

a) Pie Chart

b) Histograms

c) Box Plots

d) Stem-and-Leaf Plot

e) Mosaic Plot

Problem 5. (2 points) What is it called when a summary statistic is not easily effected by outliers.

a) Static

b) Outlier

c) Robust

d) Not Robust

e) Skewed

Problem 6. (2 points) What is it called when data accumulates around smaller values and trails off towards larger values in a histogram?

a) Symmetric

b) Left-Skewed

c) Harmonic

d) Right-Skewed

e) Uniform

Problem 7. (2 points) If the mean is greater than the median for a dataset visualized as a histogram, how would you describe the symmetry of the histogram?

a) Right-Skewed

b) Left-Skewed

c) Unimodal

d) Symmetric

e) Outliers Present

Problem 8. (2 points) The marginal distribution is found in which part of the contingency table?

a) Columns

b) Rows

c) The interior of the table

d) The margins of the table

e) The marginal distribution is not found in a contingency table

Problem 9. (3 points) Label the following components of the box plot below. If it is unclear where you are placing the label on the box plot, no credit will be given.

a) Outlier

b) Q1

c) Median

d) Smallest observation less than Q3 + 1.5*IQR

e) 75th percentile