STA2023 – Test 4 Partial List of Topics

Many of these topics will be included on the exam, but not necessarily all of them. Furthermore, other questions may be asked that are not included in this review. In addition to this review, look over the labs, worksheets and the assigned problems from the textbook.

1. Given a table of 2-variable data:
   A. What are the explanatory and response variables?
   B. Sketch a scatter plot and describe the form, association (direction), and strength of this data as well as any outliers or influential observations (using complete sentences).
   C. Be able to interpret a scatterplot point in reference to the story problem situation.
   D. Be able to interpret a point on the regression line in reference to the story problem situation.
   E. Know the difference between $Y$ and $\hat{Y}$.
   F. Know the two types of associations and be able to interpret them in English sentences.
   G. Use your calculator to find the correlation coefficient of this data and interpret it in a sentence or two.
   H. Recognize and use the properties of correlation.
   I. Find and interpret the meaning of $r^2$, using a complete sentence.
   J. Use your calculator to find the equation of the least-squares regression line. Stat, calc, Linreg
   K. Interpret the meaning of the slope and/or vertical intercept of this line in a complete sentence. Be sure to include proper units of measurement with your answer.
   L. Use the regression line to make predictions.
   M. Recognize outliers and influential observations.
   N. Recognize extrapolation.
   O. Define and recognize a lurking variable.
   P. Calculate and interpret the residual error for a given point.
   Q. Recognize and use symbolic notation for predicted value of y and correlation.

Know how to use your calculator to help you with anything mentioned above.