BUS 210, Quiz #2, Fall 2017

Name KEY

Section _____

Instructions: This quiz is to be completed entirely in class. You may not use cell phones, and you may only access internet resources you are specifically directed to use. Go to Blackboard and open the data file posted under Quiz #2. Use it to answer the following questions. Place your answers to the bolded questions directly on this page.

1. Create a Pivot Table of Smoking vs. Drinking. N = non, O=Occasional, H=heavy (S=smoker, D=drinker). **What is the number of people who are heavy drinkers? What is the number of people who are heavy smokers?** Create a column graph of the data. **What do you notice?**

   2365, 1448

   non-smokers are closely related to non- or occasional drinking

2. Suppose that someone from this data set is selected at random. Answer the following questions:
   a. **What is the probability that the person is a heavy smoker?**

      1448/8761 = 16.53%

   b. **What is the probability that the person is a heavy drinker?**

      2365/8761 = 26.99%

   c. **What is the probability that the person is a heavy smoker given that they are a heavy drinker?**

      733/2365 = 30.99%

   d. **What is the probability that the person is a heavy smoker and a heavy drinker?**

      733/8761 = 8.37%

   e. **What is the probability that the person is a heavy smoker or a heavy drinker?**

      3080/8761 = 35.16%

3. Using the data for #3, create a scatterplot that examines the relationship between enrollment (x) and acceptance race (y). **What is the regression line, and R^2 value? Does the trend appear to be linear or non-linear? Negative or positive correlation? If the trend continued, what would you expect the acceptance rate to be if the school enrolled 2000 people in their program?**

   $y = -.0002x + 0.3511$

   $R^2 = 0.3138$

   negative correlation

   $y(2000) = -.0489$ or -4.89% this makes no sense.

Submit your completed Excel file to Blackboard, and submit your paper quiz to your instructor in class.