ACTIVITY 4
PART A – October 30, 2017
Week 6, Monday

Due: Monday, November 6

Instructions: A hard copy of the final version of Activity #4 is due on Monday, November 6 (Week 7). You will be given the activity in parts, but it is your responsibility to keep track of all questions on one master document for each respective activity.

Using the midterm dataset (user: pls205; pass: !pls205*) , evaluate the following hypotheses:

Hypothesis 1: There is a difference amongst frequency of church attendance (info_church) on their feelings about Donald Trump (score_trump).

(1) What is your **independent variable**?
    (a) What is the **level of measurement** for this variable?
    (b) Report the value(s) for the most appropriate measure of **central tendency.**
    (c) Report the value(s) for **variability.**
    (d) Draw the most appropriate graph for this variable.
(2) What is **dependent variable**?
    (a) What is the **level of measurement** for this variable?
    (b) Report the value(s) for the most appropriate measure of **central tendency.**
    (c) Report the value(s) for **variability.**
    (d) Draw the most appropriate graph for this variable.
(3) Discuss a possible **causal mechanism** for this hypothesis. *Explain your logic.*
(4) State the **null hypothesis**.
(5) What is the appropriate **test statistic** you should calculate for this hypothesis?
    (a) What is the value of that **test statistic**?
    (b) What are the **degrees of freedom** for this test?
    (c) What is this test's **significance value**?
    (d) *Interpret.* Is there a significant difference on how people feel about Donald Trump based on their church attendance? Is this result what you expected?

Answer the following questions using the midterm dataset. You'll have to perform ANOVAs for each of these questions.

(6) Evaluate the hypothesis: There is a difference amongst respondents of different political parties (info_pid) on the chance that they would vote for President in 2016 (willvote2016).
    (a) Copy and paste the "ANOVA" output box onto your document.
    (b) What is the F-value for this test statistic?
    (c) What is the probability that this relationship is due to chance?
    (d) Do we accept or reject the hypothesis?

(7) Evaluate the hypothesis: There is a difference amongst how respondents feel about Barack Obama's job performance (obamajob) on their feelings about blacks (score_black).
    (a) Copy and paste the "ANOVA" output box onto your document.
    (b) What is the F-value for this test statistic?
    (c) What is the probability that this relationship is due to chance?
    (d) Do we accept or reject the hypothesis?
(8) Evaluate the hypothesis: There is a difference amongst how respondents feel about Barack Obama's job performance (obamajob) on their feelings about whites (score_white).
    (a) Copy and paste the "ANOVA" output box onto your document.
    (b) What is the F-value for this test statistic?
    (c) What is the probability that this relationship is due to chance?
    (d) Do we accept or reject the hypothesis?
(9) Evaluate the hypothesis: There is a difference amongst often people go to church (info_church) on their cognitive skills and abilities (cognitionscore). Answer the following questions:
    (a) Copy and paste the "ANOVA" output box onto your document.
    (b) What is the F-value for this test statistic?
    (c) What is the probability that this relationship is due to chance?
    (d) Do we accept or reject the hypothesis?
(10) Evaluate the hypothesis: There is a difference amongst how respondents feel about discrimination against men (discrim_men) on their belief that women elected officials benefit women (women_index).
    (a) Copy and paste the "ANOVA" output box onto your document.
    (b) What is the F-value for this test statistic?
    (c) What is the probability that this relationship is due to chance?
    (d) Do we accept or reject the hypothesis?

The remaining questions do not require you to use SPSS:

(11) If your independent variable is nominal with two categories and your dependent variable is interval-ratio, what test-statistic would you use?
(12) If you have the following hypothesis, "There is a difference amongst multiple levels of income on their thermometer score for Paul Ryan," which test statistic would you use? a) T-test; b) ANOVA; c) Other
(13) If you have the following hypothesis, "There is a difference between males and females on their categories of party identification," which test statistic would you use? a) T-test; b) ANOVA; c) Other
(14) After performing an ANOVA, you receive a significance value of .051. Convert this to a percentage and write out the complete interpretation of the hypothesis by explaining the probability the relationship is due to chance.