

## ACTIVITY 2

PART A – October 4, 2017

Week 2, Wednesday

**Due:** Wednesday, October 11

**Instructions:** A hard copy of the final version of Activity #2 is due on Wednesday, October 11 (Week 3). 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.

- (1) Calculate the **mean** for the data that you see on the screen. Show your work.
- (2) Calculate the **mean** for the data that you see on the screen. Show your work.
- (3) Calculate the **median** for the data that you see on the screen. Show your work.
- (4) Calculate the **mode** for the data that you see on the screen. Show your work.
- (5-8) Answer the questions about **level of measurement**.
- (9-12) Answer the questions about **measures of central tendency**.
- (13-16) Answer the questions about **bar graphs** or **histograms**.

For the remaining questions, work with a partner. You have been tasked to figure out why midterm scores for this class have been so low. Using the scientific method, come up with one hypothesis that explains the midterm score. Given the data that is accessible to you, discuss with your partner what is the best explanation for my student's midterm scores. Develop a hypothesis around this explanation.

- (17) Who is your partner?
- (18) What is your hypothesis?
- (19) Determine if this hypothesis is **directional** or **non-directional**?
- (20) What **concept** would serve as your **dependent variable**?
- (21) What **concept** would serve as your **independent variable**?
- (22) What is a possible **causal mechanism** for this hypothesis? *Explain your logic.*
- (23) State the **null hypothesis**.
  
- (24) For 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.
  
- (25) For your 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.