Workshop 2

Central Tendency

Name: _____

Date Completed: _____

Provide all solutions, answers and requested outputs after each question.

Questions 1 to 3 are based on the following data:

| Subjects | Manner of Approach | | | Gender |
	Aggressive	Neutral	Passive	
Frank	13	11	5	M
Henry	17	13	12	M
Steve	10	10	10	M
Bruce	16	14	6	M
Larry	22	15	12	M
Larry	22	11	11	M
Martin	18	14	10	M
Denny	15	15	13	M
Ken	12	14	10	M
Mary	19	12	6	F
Alice	22	15	8	F
Janet	18	9	6	F
Karen	18	14	9	F
Barbara	17	15	7	F
Frances	23	12	5	F

Based upon personal experience, a researcher hypothesized that the manner is which an individual is approached by another (i.e., in an aggressive, a neutral, or a passive attitude) influences the emotional reaction of the person approached. Emotional comfort level was operationally defined as the number of inches apart the two individual stood. The researcher observed the number of inches apart under three conditions for 15 subjects (9 male and 6 female).

Question 1. Compute the mean, median, and mode for each of the three approach conditions. Based upon these findings, what conclusion might the researcher reach?

	Aggressive	Neutral	Passive
Mean			
Median			
Mode			

Question 2. Compute the mean, median, and mode for both males and females (ignoring the manner of approach). Based upon these findings, what conclusion might the researcher reach?

	Mean	Median	Mode
males			
females			

Question 3. Compute the mean for both males and females under each of the three approach conditions. Based upon these findings, what conclusion might the researcher reach?

	Aggressive	*Neutral*	*Passive*
males			
females			

Questions 4 to 6 are based upon the following data:

	Monday	*Tuesday*	*Wednesday*	*Thursday*	*Friday*
Lecturers	13	26	13	26	13
Assistant Professors	26	30	22	18	14
Associate Professors	29	14	28	31	34
Full Professors	0	8	6	10	63

The university administration is in a budget crisis. To justify faculty salaries, an observer records the number of minutes late to class for each of the four types of faculty positions and for each minute late to class for each of the four types of faculty positions and for each day of the week. The total numbers of minutes tardy are shown above.

Question 4. On average, on which day of the week are instructors most tardy?

	Monday	*Tuesday*	*Wednesday*	*Thursday*	*Friday*
Instructors, X					

Question 5. On average, which instructor category is latest to class? How does distribution skew affect your conclusions?

	Lecturer	*Assistant*	*Associate*	*Full*
averages, X				

Question 6. The following hourly salary rates apply to each faculty level. From these rates and the data above, calculate which faculty category costs the university the most in "lost" time?
hint: Lost time is (Cost per hour)(Hours late for category on instructor)

Lecturer	$8.50
Assistant Professor	9.75
Associate Professor	10.25
Full Professor	11.00

Question 7. For the ODE.cvs dataset, calculate the mean, median and mode(s) (exclude all cases with values = 0)

Question 8. For the ODE.cvs dataset,
        (a) Construct a Frequency table with class width = 10
        (b) What type of distribution is part b?

Question 9. For the ODE.cvs dataset,
        (a) Construct a stem and left diagram
        (b) Does this looks like a symmetric distribution?

Question 10. From the group frequency table you construct in question 8a,
        (a) Calculate the mean
        (b) Calculate the median
        (c) State the mode