

**Problems: CENTRAL TENDENCY & DISPERSION**

1. You have randomly sampled 80 ISU undergraduates. Each subject was asked about his/her agreement or disagreement with the statement, "The Whopper tastes better than the Big Mac." Your data are as follows:

Table 1: ISU Undergraduates' Attitudes on the Burger Controversy.\*

	<u>number of respondents</u>
Strongly disagree	16
Disagree	20
Undecided	20
Agree	16
Strongly agree	8

\* Hypothetical data.

a. Calculate a measure of central tendency and a measure of dispersion for these data. Be sure to show how you got your answer.

b. What is the attitude of your respondents at the 30<sup>th</sup> percentile? Again, show how you arrived at your answer!

2. Emile Durkheim (1897) argued that religion provides adherents with clear definitions of what behaviors are appropriate. Without these religious definitions people are left without direction for their lives. When severe enough this "directionlessness" can lead such people to commit suicide.

You have assembled a random sample of 100 Americans, whom you have asked the following questions and from whom you have obtained the data in Table 2:

(i) Indicate whether you agree or disagree with the following statement: No matter how complicated the circumstances, I always know what is right or wrong for me to do.

(ii) Do you attend church more than once per week, once per week, or less than once per week?

Table 2: Church Attendance by Knowing Right or Wrong.\*

	Church Attendance		
	More than weekly	Weekly	Less than weekly
Agree	12	33	8
Disagree	21	10	16

\* Hypothetical data.

a. Compute a measure of central tendency and dispersion for Americans' church attendance. Do NOT assume equal distances between adjacent categories, and be sure to show how you found your answers.

b. Give the value of church attendance at the 15<sup>th</sup> percentile for those Americans who agree that they always know right and wrong. Again, be sure and show how you found your answer!