INCLUDE THIS PAGE AS A COVER SHEET TO YOUR CASE STUDY. (Rubric Side up)

Case Study, Chapters 1-2: Comparing Two Groups   Name_____

In this case study, you will **compare two (or more*) groups**, and compare them based on the distribution of a **quantitative variable.**   You will use Fathom to automate the process of making visual displays, and appropriate summary statistics. You will copy/paste this information into a document. **Tasks to complete:**

1. Say which two groups you're comparing and what quantitative variable you're comparing them on. Include:

- An appropriate visual display to compare the two groups
- Appropriate measures of center / spread,
- A few sentences comparing the distributions. Use numerical summaries as support.

2.   Interpreting z-scores and percentiles.

a) Find yourself in one of these two groups, and your corresponding z-score in this distribution. Interpret the z-score in appropriate context. (Note: If you did not answer this question, or you answered anonymously, then your teacher will select a person for you).
b) Show a percentile plot. Find yourself, and the percentile value closest to you. Interpret the meaning of this percentile in context.

3. Suppose a normal model with the corresponding mean / SD found in #2 were used to approximate the percentage of students in the group who had a lower value than yours.   What would the normal model predict?

4. In the variable you used in 2 and 3, **Provide clear evidence to** assess whether a normal model is an appropriate to model the approximate shape of this distributions.   Justify with **CLEAR** evidence.

Standards for the assignment

Please: Read the Rubric! Be sure you have fulfilled each expectation on the rubric clearly and explicitly.

The assignment must be turned in on time. Points are awarded for being on time (and, consequently, not awarded for being late).

The assignment should be word-processed.   Appropriate graphs and summary statistics should be constructed in Fathom.

Verbal analysis, graphs, and summary statistics should work together, and be edited for clarity, readability and relevance.   Unnecessary, disorganized, or error-laden work will be assigned the appropriate grade.

* Comparing more than two groups is a "high degree of difficulty" task. If you take this on, be prepared to take extra care in your work to be sure your analysis is thorough and clear.

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Name: _____

Your Comparison groups: _____

Your variable for analysis: _____

Grading Rubric:

Objective	Essentially Correct	Partially Correct	Incorrect
1a. Provides appropriate information/support for comparing groups (visual displays, appropriate statistics)	2	1	0
1b. Completely, concisely, clearly and correctly compares groups in context.	4	2	0
2a. Correctly computes/ interprets z-score.	2	1	0
2b. Correctly finds/ interprets percentile.	2	1	0
3. Correctly uses normal model to find the appropriate percentage. Work shown.	2	1	0
4. Correctly assesses whether a normal model is appropriate.	2	1	0
5. Case Study is ON TIME. (Note: A negative score for this may be applied for multi-day lateness).	4	XXXXXX XXXXXX XXXXXX XXXXXX	0
6. Presentation / use of language generally clear, organized, and reflects well on student. Grammar/ Typos / writing / Cover Page.	Good: 2	So-So: 1	Weak: 0
Total:			

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