

Name: _____
MATH 100
Fall 2023
HW 13: Due 12/06

*“When a theory is generated by
ransacking data, we can’t use these
pillaged data to test the theory.”*
– Gary Smith

Problem 1. (10pt) Consider the following dataset:

318.8, 179.7, 2111.3, 395.7, 412.1, 371, 78.8, 146.3, 231.3, 412, 220.4

Showing all your work, complete the following:

- (a) Find the median of this dataset.
- (b) Find the 40th percentile for this dataset.
- (c) Find the 5-number summary for this dataset.
- (d) Sketch a box-plot for this dataset.

Problem 2. (10pt) Consider the following dataset:

23, 38, 17, 20, 26

Showing all your work, complete the following:

- (a) Find the mean of for this dataset.
- (b) Find the standard deviation for this dataset.
- (c) If you increased each of the numbers above by 3, what happens to the mean and standard deviation? Explain.
- (d) Would the median or the mean be a more robust measure of center for this dataset? Explain.