



PSTAT 5A: Homework 01

Summer Session B 2025, with Annie Adams

1. Consider the list of numbers $X = \{-3, -1, 0, 0.4, 0.7, 3.9, 6\}$.

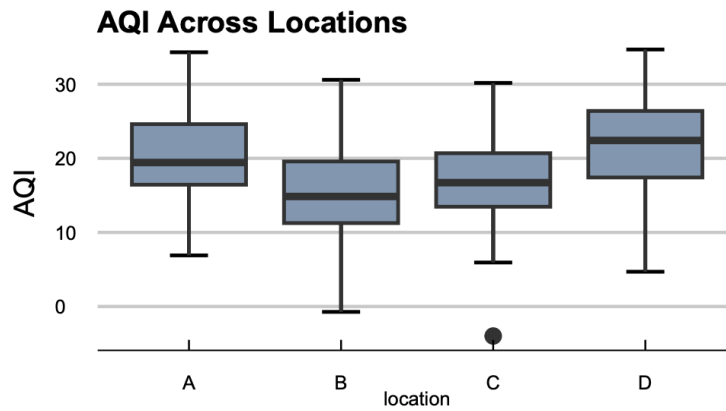
(a) Compute the mean of X .

(b) Compute $\text{median}(X)$, the median of X .

(c) Compute the standard deviation of X .

(d) Compute the range of X .

2. A researcher has collected measurements on the AQI (Air Quality Index) at several locations in Santa Barbara. She has labeled her locations A through D, and collected 100 AQI measurements from each location. The results of her study are displayed graphically below:



(a) What is the (approximate) median AQI at location A?

(b) Approximately what percent of AQI readings at Location D were less than 16?

(c) Are there any outliers at any of the locations?

(d) From the plot, does it appear that the different locations have different AQI readings? Explain briefly.