

MATH 21-01 (Introductory Statistics), HW3 (100 points). Due: 09/23/2016 in class.

You may use software such as R to check your calculations, but please supply all computations of mean, median, standard deviation, etc. by hand.

Not from textbook (50 pts)

Suppose the yearly before tax salaries in dollars of several employees at the Tufts library are: {31000, 35000, 40000, 32000, 35000, 37000, 48000, 29000, 31000, 37000, 38000, 12000}

- (A) Compute the mean, median, mode, the variance and standard deviation of the data. Show your work.
- (B) Are there any outliers? Why or why not?
- (C) Remove the lowest salary from the list. Compute the new mean, median, and standard deviation of the new data set. Can you explain your results (with respect to the number in A).
- (D) Suppose everyone on the new list in (C) received a 10% raise. Supply the new resulting data set. What is the mean, median, and standard deviation of the new data set? Can you explain your results (with respect to the numbers in C)?
- (E) Suppose everyone received 35000. What would be the mean, median, and standard deviation of the salaries in this case?

From textbook (50 pts)

- Section 3-2: 8 - 10, 22, 23
- Section 3-3: 10,12,13,15,16