

A marketing consultant observed 14 shoppers at random at a grocery store. The amount each shopper spent, rounded to the nearest dollar, is arranged in increasing order below:

1, 9, 13, 14, 17, 22, 28, 35, 36, 44, 51, 59, 70, 110

- a. Complete the table with the requested six-number summary for these data.
(6 points)

Min	Q1	Median	Mean	Q3	Max

- b. For the given sample, $SS_{xx} = \sum_{i=1}^{14} (x_i - \bar{x})^2 = 11037.21$. Use this value to compute the sample standard deviation. (3 points)

- c. Based on the information in the sample, how much money would you expect a randomly selected shopper to have spent if that shopper's spending is 1 standard deviation above the mean? Round your answer to the nearest dollar. (4 points)

- d. Assume that the distribution of money spent is mound-shaped (unimodal) and approximately symmetric. Using the empirical rule, about what percentage of shoppers would you expect to spend more than the value you calculated in part c)? (3 points)

- e. Using the 1.5 x IQR criteria, identify any points that you would flag as suspected outliers.
(4 points)