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MAT 340

03/28/2023

Assignment 2

To find the quartiles:

Q1 = The median of the lower half of the data set.

Q2 = The median of the data when sorted in ascending order.

Q3 = The median of the upper dataset after the dataset is divided by the median value.

A: 24, 25, 37, 39, 49, 64, 70, 82, 82, 84, 93

Five-Number Summary: Minimum = 24

Maximum = 93, Q1 = 37, Q2 = 70, Q3 = 82.

B: 24, 44, 44, 52, 58, 66, 66, 69, 85, 88, 93

Five-Number Summary: Minimum = 24

Maximum = 93, Q1 = 52, Q2 = 69, Q3 = 88.

C: 20, 34, 47, 50, 60, 63, 72, 74, 81, 91, 74

Five-Number Summary: Minimum = 20

Maximum = 91, Q1 = 34, Q2 = 60, Q3 = 81.

D: 27, 29, 33, 41, 44, 44, 45, 47, 50, 50, 73, 85, 96, 73

Five-Number Summary: Minimum = 27

Maximum = 96, Q1 = 41, Q2 = 50, Q3 = 73.

E: (22, 29, 45, 54, 60, 74, 75, ,77, 77, 91, 77)

Five-Number Summary: Minimum = 22

Maximum = 91, Q1 = 45, Q2 = 74, Q3 = 77.

Coefficient of Variation

CV for a population:

$$CV = \frac{\sigma}{\mu} * 100\%$$

CV for a sample:

$$CV = \frac{s}{\bar{x}} * 100\%$$

A standard deviation = 24.84899, Mean= 64.09091, Coefficient of Variation = 38.77147

B standard deviation = 21.00727, Mean= 67.09091, Coefficient of Variation = 31.31165

C standard deviation = 21.76091, Mean= 62, Coefficient of Variation = 35.09824

D standard deviation = 21.32989, Mean= 51.09091, Coefficient of Variation = 41.7489

E standard deviation = 21.50442, Mean= 60.4, Coefficient of Variation = 35.60334

Box-and-Whisker Plot:

