

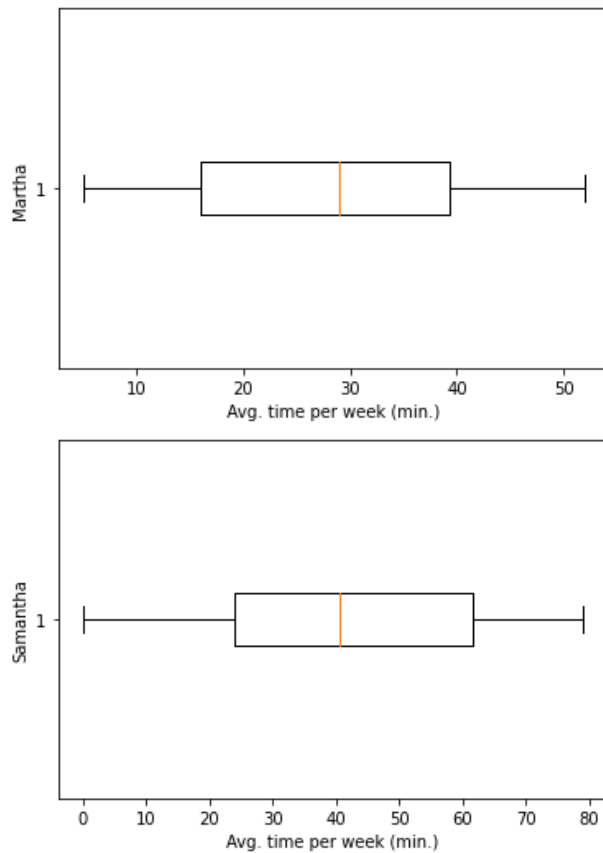
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A mentor can change everything.



Box Plots

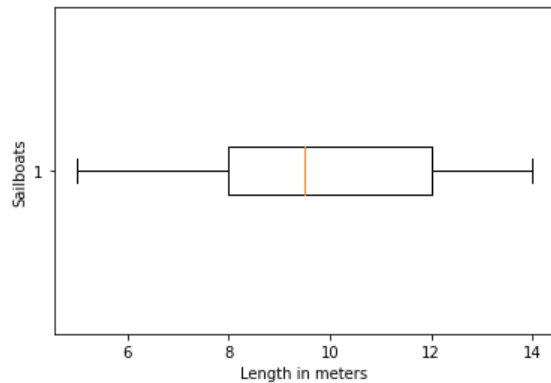
1. For a particular office building with 950 employees, Martha and Samantha each conducted a survey about the average time spent working outside of normal office hours, in minutes, each week. Both Martha and Samantha selected employees at random and collected the relevant information. Martha collected data from 120 employees, and Samantha collected data from 95 employees. The results from Martha's and Samantha's surveys are summarized below.



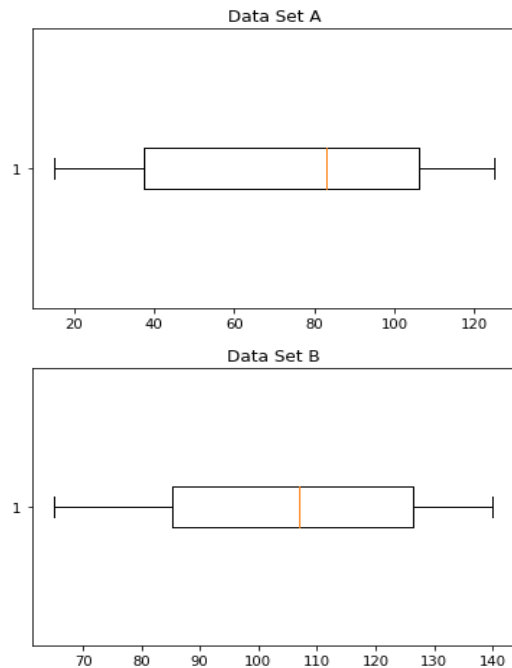
Which of the following is closest to the value of the difference between the median values of the two data sets?

- A) 5
- B) 13
- C) 20
- D) 23

2. The lengths of 22 sailboats are displayed in the box plot below. Which is the best estimate of the median length, in meters, of the 22 sailboats?

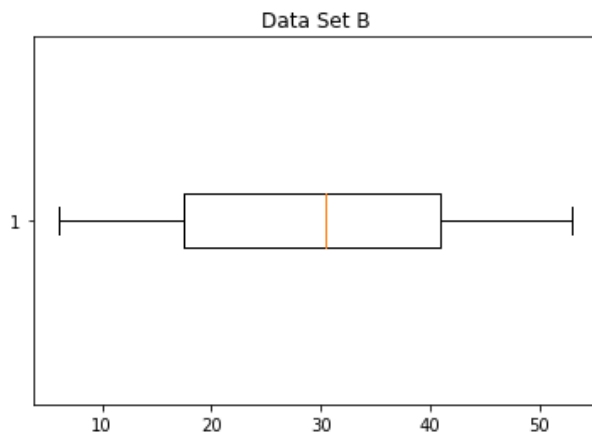
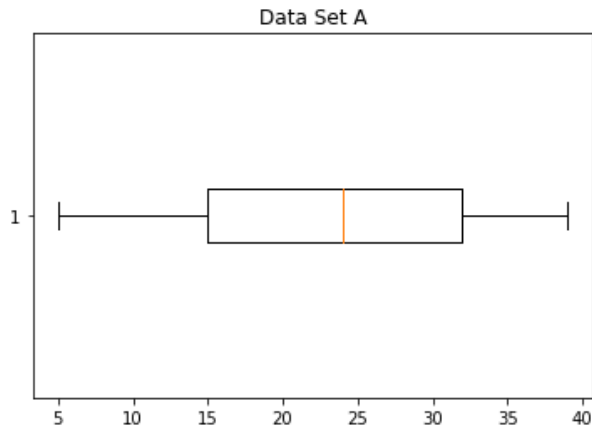


- A) 5.5
B) 8
C) 9.5
D) 12
3. Each of the box plots shown below summarizes a data set. Data set A has a range of 110, and data set B has a range of 75. If the two data sets are combined into one data set, what is the approximate range of the combined data set?



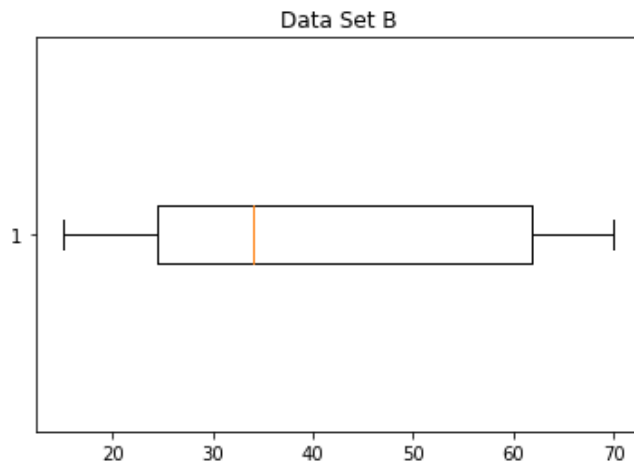
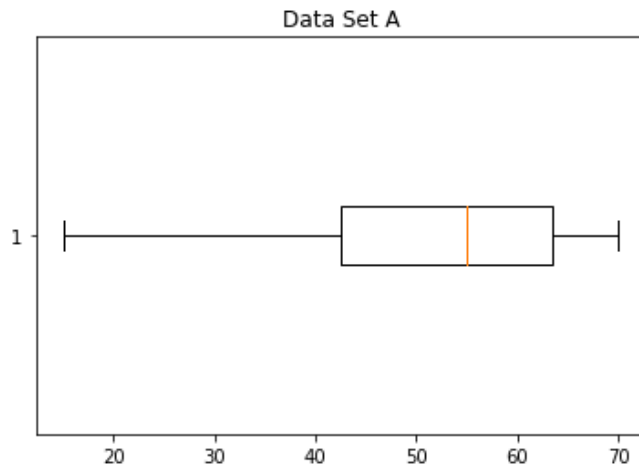
- A) 35
B) 92.5
C) 125
D) 185

4. The box plots below show the distributions of two data sets. If a is the median of Data Set A and b is the median of Data Set B, which of the following statements must be true?



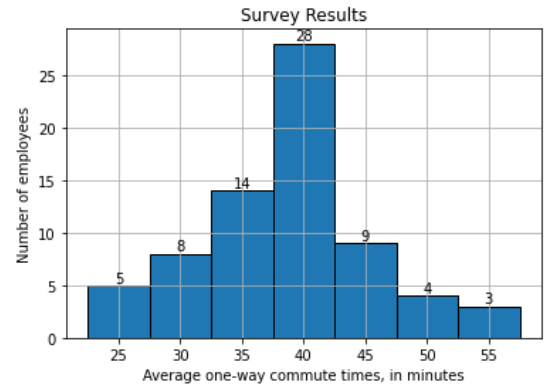
- A) $a < b$
B) $a > b$
C) $a = b$
D) There is not enough information to compare.

5. The box plots below show the distributions of two data sets. Which of the following statements must be true?

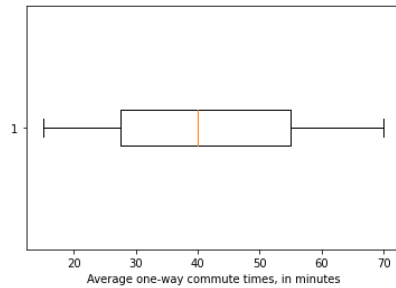


- A) The minimum value of numbers in data set A is greater than the minimum value of numbers in data set B.
- B) The range of data set A is greater than the range of data set B.
- C) Data set A has more data values than data set B has.
- D) The median of data set A is greater than the median of data set B.

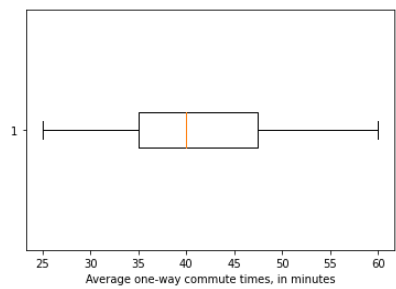
6. The histogram to the right shows the results of a recent survey about average one-way commute times. Which of the box plots below could represent the data?



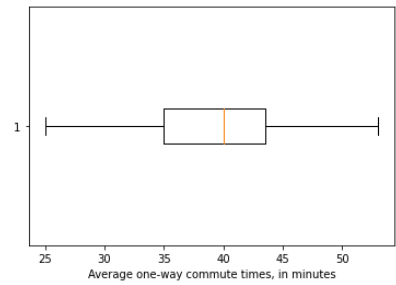
A)



B)



C)



D)

