

UNIT 10 - DAY 11
OUTLIER NOTES - PART 2



The data represents the lengths (in seconds) of the songs played by a rock band at a concert.

~~300~~ ~~220~~ ~~250~~ ~~242~~ ~~160~~ ~~180~~ ~~172~~ ~~200~~ ~~284~~ ~~290~~ ~~265~~ ~~234~~ ~~190~~

Order the data:

~~160~~ ~~172~~ ~~180~~ ~~190~~ ~~200~~ ~~220~~ ~~234~~ ~~242~~ ~~250~~ ~~265~~ ~~284~~ ~~290~~ ~~300~~

$185 \rightarrow Q1$ $274.5 \rightarrow Q3$

$274.5 - 185 = 89.5 \rightarrow$ This means that the middle half of the data varies by 89.5 seconds.

Find the IQR:

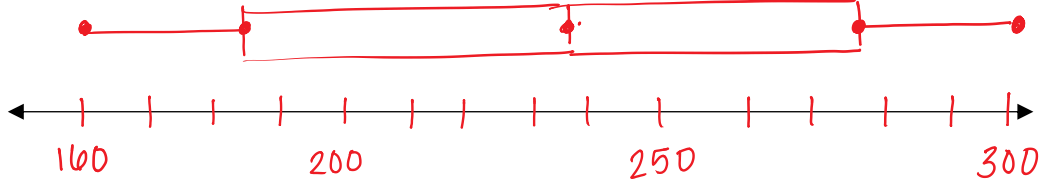
$274.5 - 185 = 89.5 \rightarrow$ This means that the middle half of the data varies by 89.5 seconds.

Determine if there is an outlier. If there is, state the outlier and explain why:

$$89.5 \times 1.5 = 134.25$$

$50.75 - 408.75$ (no outliers because all #'s in range)

Remove the outlier if necessary and create a box-and-whisker plot of the data:



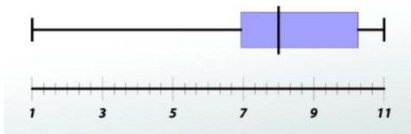
Find and interpret the range of data:

$300 - 160 = 140$ This means that the length of seconds of a song varies by no more than 140 seconds.

Describe the distribution of the data:

symmetrical

Given the box-and-whisker plot, describe the distribution of data:



skewed left

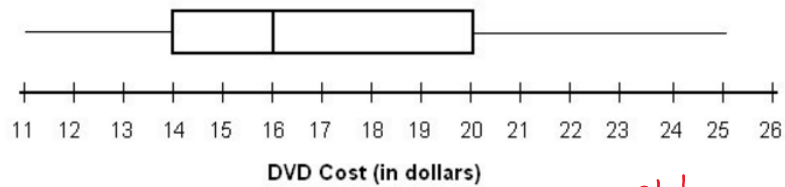


skewed right



symmetrical

Given the box-and-whisker plot, answer the following questions. The data represents the average cost of a DVD in dollars.



The data is best described as skewed right (symmetrical, skewed right, skewed left)

25% of DVDs cost between 11 and 14 dollars.

50% of DVDs cost between 14 and 20 dollars.

25% of DVDs cost between 20 and 25 dollars.