

Assignment

Write

Describe in your own words how to compare two data sets.

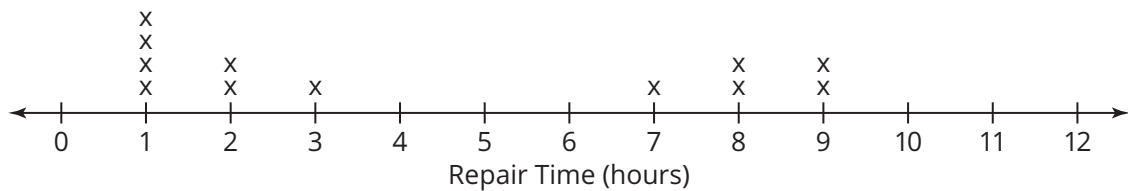
Remember

When comparing two data sets, if at least one of the data sets is skewed, you should use the median and IQR to compare the data.

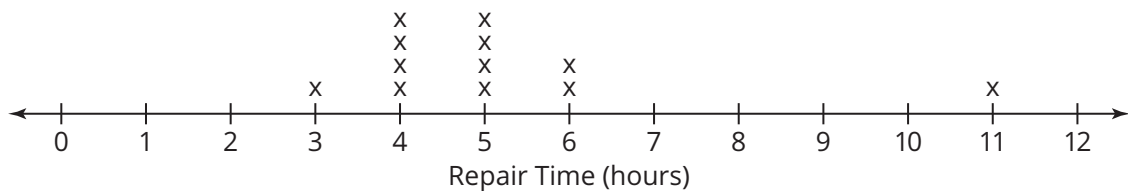
Practice

1. Dannette and Alphonso work for a computer repair company. They must include the time it takes to complete each repair in their repair log book. The dot plots show the number of hours each of their last 12 repairs took.

Dannette's Repair Times



Alphonso's Repair Times

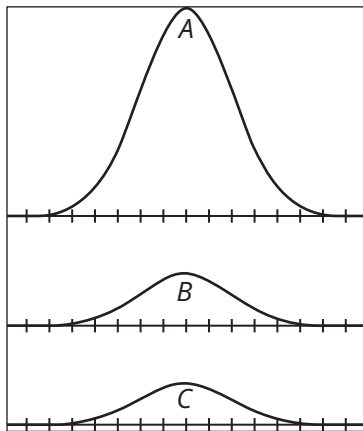


- Calculate the median, mean, IQR, and standard deviation of each data set.
- Which measure of central tendency and spread should you use to compare the two data sets? Explain your reasoning.
- Determine whether there are any outliers in either data set and recalculate the IQR, if necessary.
- Which repair person would you ask to fix your computer if you were in a hurry to have it repaired? Explain your reasoning.

Stretch

A normal curve is a bell-shaped curve that is symmetric about the mean of the data.

Normal curves *A*, *B*, and *C* represent the battery lives of a population of cell phones of comparable models from three different companies. The normal curves represent distributions with standard deviations of 0.1, 0.4, and 0.5.



1. Match each standard deviation value with one of the normal curves and explain your reasoning.

Review

1. Consider the data set: 6, 7, 7, 10, 12, 16, 16, 17, 20, 22, 22, 22, 23, 24, 24, 24, 24, 24, 25, 40.
 - a. What is the five number summary and the IQR for the data set?
 - b. Are there outliers for the data set? If so, what are they?
2. Solve each equation for x .
 - a. $\frac{1}{5^{x-3}} = 25^{2x}$
 - b. $16^{-2x} = \left(\frac{4}{64}\right)^{x+6}$
3. Determine whether the expressions are equivalent. If they are not equivalent, write an expression equivalent to each of the expressions provided.
 - a. $2 + (6^3 \cdot 6^{10}) - 9^{\frac{1}{2}}$ and $1 + 6^{30}$
 - b. $\frac{4^{(12 \cdot 2)}}{4^{(3 \cdot 9)}} + \frac{18^5}{9^5}$ and $4^{-3} + 2^5$