
## No e There are more c o han needed

Only mea re o variabili y able o ind are range and in erq ar ile range no mean ab ol e devia ion	i all o he individ al da a	I o able o ind minim m q ar ile <sup>rd</sup> q ar ile ma im m and pre ence o o lier
i allo he individ al da a	ea re o variabili y canno be o nd	Only mea re o cen er able o ind i median no mean
ble o ind mea re o cen er mean and median	Doe no how individ al da a	Nomea reocener canbeond
Diplay each e o da a a a do or an over a n mber line	S mmarize da a wi h a bo and whi er over a n mber line howing di rib ion	I I

Given only the three displays from You Try 1, answer the following using complete sentences.

- 1) What is the mean and mean absolute deviation of the data?
- 2) What is the interquartile range?
- 3) Do these displays clearly skew left, skew right, or show symmetry? If any are different explaining their differences.
- 4) What conclu

## Sample Answers to the Sample Data only! Students' answers will vary based on their data.

Given only the three displays from You Try 1, answer the following using complete sentences.

- 1) What is the mean and mean absolute deviation of the data? *The mean is*  $3\frac{1}{3}$  *and the mean absolute deviation is*  $1\frac{5}{9}$ .
- 2) What is the interquartile range? *The interquartile range is 3.*
- Do these displays clearly skew left, skew right, or show symmetry? If any are different explaining their differences. *The displays seem ever so slightly skewed left. One might argue that they are mildly symmetric.*
- 4) What conclusions can be drawn because of the length of the whiskers on the box plot? Both whiskers seem to be about the same size which show that the data is evenly spread on each side of the interquartile range.
- 5) What conclusions can be drawn because of the location of the median on the box plot? The median is not located in the middle of the box, it is slightly left of center. Therefore the data does not seem symmetric.
- 6) Does this seem like a large enough sample size to make reliable conclusions about the distribution of numbers rolled using one die?
  The data seems to be close to what one would expect. However, it would be a more accurate and reliable representation if the die was rolled more times.

7)

rade le on <sup>h</sup> grade ma h cla were cho en a random and heir heigh were mea red in inche Their heigh were mea red a

and

Randomly choo e welve den in yo r da and record heir heigh in inche

Sample Results from 8<sup>th</sup> grade class: 58, 63, 68, 66, 59, 67, 62, 63, 60, 72, 60, and 63

Crea e a do ble bo plo or he wo e o da a below

- 1) What is the difference between the medians of the two data sets?
- 2) What is the difference between the ranges of the two sets of data?
- 3) What is the difference between the interquartile ranges of the two sets of data?
- 4) Describe how the data is skewed or symmetric for each sample.
- 5) What conclusions can be made about the heights of 6<sup>th</sup> graders versus 8<sup>th</sup> graders based on these box plots?

Roll one die ime and record yor re I Thi will be he ir e o da a Then roll one die ano her ime and record yor re I Thi will be yor econd e o da a

Sample Data

First set of data: 1, 1, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 4, 4, and 4.

Second set of data: 1, 1, 1, 2, 2, 3, 3, 3, 4, 4, 5, 5, 6, 6, and 6.

Crea e a do ble do plo or he wo e o da a below

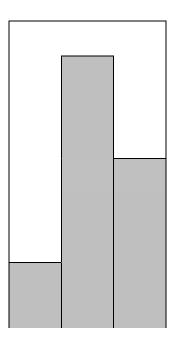
Roll wo dice ime and record yo r re I Thi will be he ir e o da a Then roll wo dice ano her ime and record yo r re I Thi will be yo r econd e o da a

Sample Data

First set of data: 2, 4, 5, 5, 6, 6, 7, 7, 7, 8, 9, 9, 10, 10, and 12.

Second set of data: 4, 4, 5, 5, 6, 6, 7, 7, 7, 8, 8, 9, 9, 11, and 12.

Crea e wo hi ogram ide by ide or he wo e o da a below



## Sample Answers to the Sample Data only! Students' answers will vary based on their data.

1) Compare the skew or symmetry of the two histograms.

Based on the histograms, the data seems mildly symmetric. Possibly slightly skewed right. However the intervals are misleading because it isn't possible to roll a 1 with two dice.

2) What conclusions can be made about the 1<sup>st</sup> 15 rolls versus the 2<sup>nd</sup> 15 rolls based on these histograms?

Based on the histograms, the results seem very similar. AlFI 12 T.0.2 653.47 Tm0 g 0.201 Tcft567

Displays each set of data as a dot or an x over a number line.

Summarizes data over a number line, showing distribution and spread.

Separates data into four parts. Even though they may differ in length, each part or quartile is 25% of the data.

The box shows the middle 50% of the data, the interquartile range.

The median does not always split the box in half because the data may be clustered toward one of the quartiles.

Short whiskers indicate concentrated data in the first or fourth quartiles.

Long whiskers indicate that

## Grade 6:

The cost in dollars of a cheeseburger at 8 different restaurants is displayed on a dot plot below.

ŵ	o a Chee eb rger	

Based on the dot plot above, indicate whether the following are True or False.

e is 2. 157.20 66.744 61.()6()6()-13()6()6()-13()6()6()6()-13

Answer Key to Warm Up Above

Grade 7:

Warm-Up Answer Key