

Booker T. Washington Summer Math Packet 2017

Completed by Thursday, August 24, 2017

Go to the BTW website (<http://btw.tulsaschools.org/>) then click the summer assignments (beach ball) and choose the course that you are enrolled in for the 2016-17 school year.

Helpful websites:

<http://patrickjmt.com/>

Free site with video lectures

<http://www.khanacademy.org/>

Free site with video lectures

<http://tutorial.math.lamar.edu/Classes/Alg/Alg.aspx>

Free site with notes and problems

www.pearsonsuccessnet.com

Site from textbook publisher Pearson (Only available to students who have access from prior years)

Vocabulary: Define/Explain each word

5-Number

Summary

68-95-99.7 Rule

Area Principle

Bar Chart

Boxplot

Case

Categorical

Variable

Center

Conditional

Distribution

Context

Contingency

Table

CUSS

Data

Data Table

Statistics
Distribution

Name: _____

Dot plot

Empirical Rule

Fence - Inner

Fence - Outer

Frequency Table

Histogram

Independence

Interquartile

Range

Relative
Frequency Table

Rescaling

Shape

Shifting

Simpson's
Paradox

Skewed

Spread

Standard

Statistics
Deviation

Name: _____

Standard Normal
Model

Standardized
Value

Standardizing
Statistic

Stem-and-
Leaf Plot

Symmetric

Tails

Timeplot

Uniform

Unimodal

Unit

Variable

Variance

Z-Score

1. Find the descriptive statistics and create a box plot using the given data:

1, 1, 2, 3, 4, 5, 7, 8, 9, 9, 12

a. Minimum = _____ b. Quartile 1 = _____ c. Median = _____

d. Quartile 3 = _____ e. Maximum = _____ f. Mean = _____

g. Interquartile Range = _____ h. Lower Inner Fence = _____

i. Upper Inner Fence = _____

Box Plot



2. Create a Bar Chart and Dot Plot to organize the following data.

A statistic class took a survey of 100 people about their favorite automobile maker. The results came back that 30 favored Ford, 25 Chevy, 13 Nissan, 12 Toyota, and the rest favored "other".

Bar Chart

Dot Plot

3. Below are the test scores for 20 AP Statistics students. Display this data in a histogram and stem and leaf plot.

60 75 65 60 60 45 85 45 70 75 75 85 45 55 90 80 85 70
 30 80

Histogram

Stem and Leaf Plot

4. Algebra Review: solve for the missing variable

a.
$$-1.75 = \frac{x - 16.2}{0.114}$$

b.
$$z = \frac{16 - 16.3}{0.2}$$

c.
$$1.8 = \frac{14 - 14.4}{\sigma}$$

5. Solve for each variable

$$z = \frac{x - \mu}{\sigma}$$

$$x =$$

$$\mu =$$

$$\sigma =$$

6. Solve for n

a.
$$SD(\hat{p}) = \sqrt{\frac{pq}{n}}$$

b.
$$.03 = 1.96 \sqrt{\frac{(.36)(.64)}{n}}$$

c.
$$t = \frac{\bar{x} - \mu}{\frac{s}{\sqrt{n}}}$$