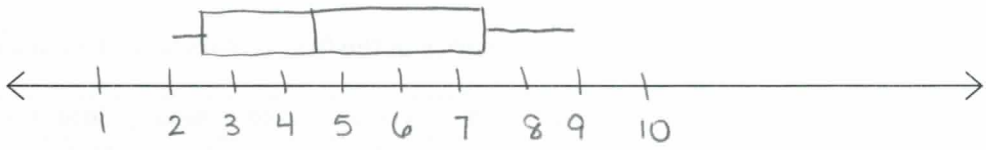
Honors Algebra 2 Trig
Unit 10 B Quiz Review - NASH

Name: Key

1. Without using your calculator, find the 5-number summary and sketch a box-and-whisker plot for the set of numbers. Be sure to clearly label your axis.

2 2 3 4 | 5 7 8 9

Minimum: 2
Q_1: 2.5
Median: 4.5
Q_3: 7.5
Maximum: 9



2. Find the mean, median, mode and standard deviation for the following scenario.

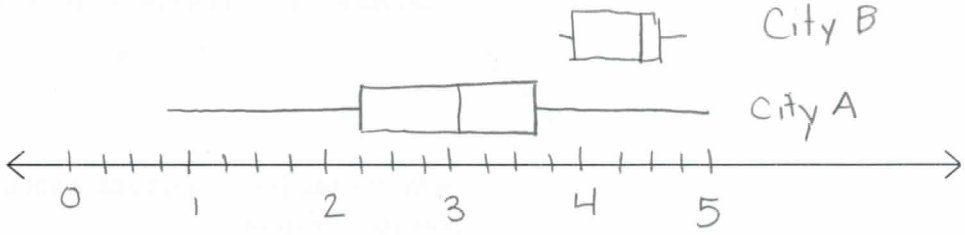
Mean: 15.19
Median: 15
Mode: 17
S_x: 1.72

Length (m)	12	13	14	15	16	17	18
Frequency	2	5	3	7	4	9	1

3. The table shows average monthly rainfall for two cities. Find the mean, median and mode, quartiles and interquartile range for each city. **On the same scale**, create a box-and-whisker plot for **both** locations.

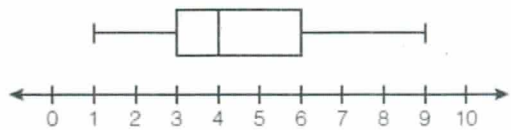
	City A	City B
Mean:	3	4.35
Mode:	3.1	4, 4.5
Min:	.8	3.9
Q_1:	2.25	4.1
Med:	3.05	4.35
Q_3:	3.65	4.55
Max:	5	4.8
IQR:	1.4	.45

	J	F	M	A	M	J	J	A	S	O	N	D
City A	3.2	3.1	4.5	5.0	4.1	2.9	1.8	0.8	2.2	2.3	3.1	3.0
City B	4.2	4.0	4.7	4.8	4.5	4.3	4.0	3.9	4.3	4.4	4.6	4.5



4. A movie theater recorded the number of tickets sold daily for a popular movie during the month of June. The box-and-whisker plot shown below represents the data for the number of tickets sold, in hundreds. Which conclusion can be made using this plot?

A. The second quartile is 600.
B. The mean of the attendance is 400.
C. The range of the attendance is 300 to 600.
D. Twenty-five percent of the attendance is between 300 and 400.



5. Describe each of the graphs, using the vocabulary listed.

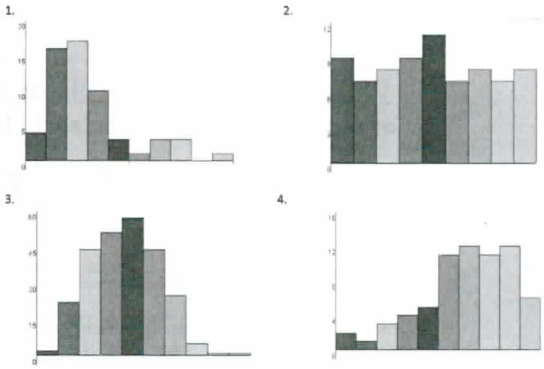
Graph #1: Skewed Right

Graph #2: Uniform

Graph #3: Symmetric

Graph #4: Skewed Left

Symmetric	Uniform
Skewed Left	Skewed Right



6. The table below contains the price of the first 10 cars sold at a used car lot during 1998 and 2008.

Used car sales in 1998	$900	$1300	$1200	$850	$800	$1250	$795	$950	$1020	$975
Used car sales in 2008	$2500	$2700	$3600	$5000	$1900	$6175	$4000	$7200	$9250	$3000

a. Find the mean, median, mode, range and standard deviation for the two years.

	$\bar{x}$	Median	Mode	Range	S_x
Used car sales in 1998	1004	962.50	none	505	185.71
Used car sales in 2008	4532.50	3800	none	7350	2361.91

b. What conclusions can you draw about the sales during the two years?

Used car sales prices varied more in 2008 based on the large St. Deviation

7. The following data represents salaries from a school district in Greenwood, South Carolina.

IQR = 19880

$32,000	$34,000	$37,500	$34,000	$33,300	$45,500
$47,000	$51,600	$55,200	$52,560	$58,400	$120,000

Min 32000
Q1 34000
Med 46250
Q3 53880
Max 120,000

a. First, assume you work for the school board in Greenwood and do not wish to increase salaries. Compute the mean, median and mode and decide which one would best support your position to not raise salaries.

Mean $50,088.33
Median 46,250
Mode 34,000

Mean of $50,088

b. Second, assume you work for the teacher's union and want a raise for teachers. Use the best measure of central tendency to support your position.

The mode would indicate we need to raise salaries.

c. Explain how outliers can be used to support one or the other position. Which measure of central tendency can be misleading when a data set contains outliers?

1.5(IQR) = 29820

outliers above $83,700

$ Outlier is 120,000

The outlier makes mean misleading.

Mean 43,732
Med 45,500