

Name:	Date:
Topic:	Class:

Main Ideas/Questions	Notes/Examples
MEAN	
MEDIAN	
MODE(S)	
LOWER EXTREME	
UPPER EXTREME	
LOWER QUARTILE	
UPPER QUARTILE	
RANGE	
INTERQUARTILE RANGE	

EXAMPLE	Given the data set {4, 10, 10, 14, 4, 25, 15, 22, 16, 10}, find each value.		
	Mean:	Median:	Mode:
	Lower Extreme:		Upper Extreme:
	Lower Quartile:		Upper Quartile:
	Range:		Interquartile Range:

BOX-AND-WHISKER PLOTS

A box-and-whisker plot shows the range of data among the quartiles.

1. What is the median of each set? _____

2. Which plot has a lesser range? _____

3. Which plot has the greater Interquartile range? _____

4. Give the upper quartile of each set. _____

5. Give the lower extreme of each set. _____

6. What percent of the data in plot B is between 60 and 85? _____

7. What percent of the data in plot A is greater than 80? _____

8. What percent of the data in plot B is less than 85? _____

STEM-AND-LEAF PLOTS

Stem-and-Leaf Plots are a way of displaying data values

9. Test Scores

Stem	Leaf
5	2 4 6 8
6	1 5 8
7	2 4 4 4 5 7
8	2 3 3
9	0 2 5 6

7 | 2 = 72

- What were the highest and lowest scores?
- Which test score occurred most often?
- In which 10-point interval did most students score?
- How many students scored 70 or better?
- How many students scored less than 70?

10. Humidity

Morning		Afternoon
	5	1 2 3 4 7 9
	6	
8 8 4	7	
9 4 0	8	

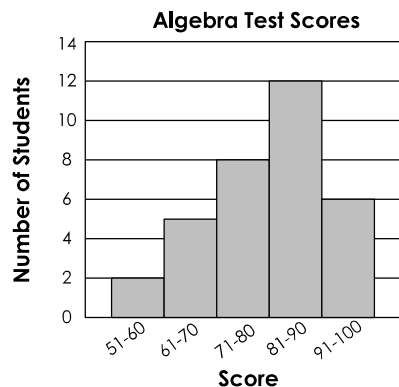
4 | 7 = 74% 5 | 1 = 51%

- What is the highest morning humidity?
- What is the lowest afternoon humidity?
- Does humidity tend to be higher in the morning or afternoon?

HISTOGRAMS

Histograms are a way of grouping data by intervals.

11. The data in histogram below represents scores on an algebra test.

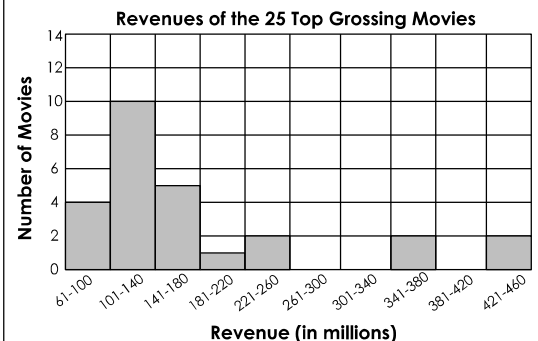


- a. How many total students took the test?

- b. How many students scored at least a 71 on the test?

- c. Can you determine the highest grade from the histogram?

12. The data in the histogram below represents revenue of the top 25 movies in a recent year.



- a. How many movies grossed at least \$141 million?

- b. How many movies grossed between \$61 million and \$180 million?

- c. Can you determine how many movies grossed between \$121 and \$140 million from the histogram?

STATISTICS on the GRAPHING CALCULATOR

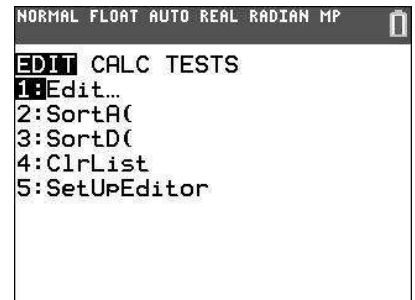
The graphing calculator is a powerful tool when it comes to measuring statistics. It can perform many of the calculating that we currently do by hand.

1

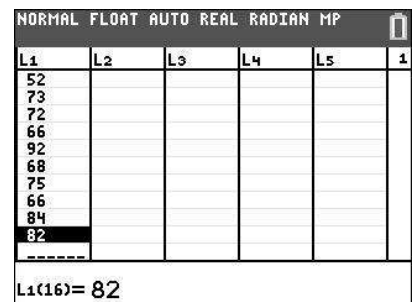
The scores 16 students received on a math quiz are shown below.

74, 98, 60, 72, 80, 91, 52, 73, 72, 66, 92, 68, 75, 66, 84, 82

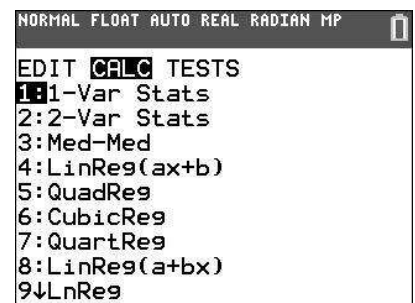
Step 1: Go to **STAT, EDIT**.



Step 2: Enter the values into **L1**.



Step 3: Go to **STAT**, arrow over to **CALC**, and choose
1: 1-Var Statistics



Step 4: Hit **ENTER** three times to see information about the data set.

$\bar{x}$ = _____ = _____

$\sum x$ = _____ = _____

n = _____ = _____

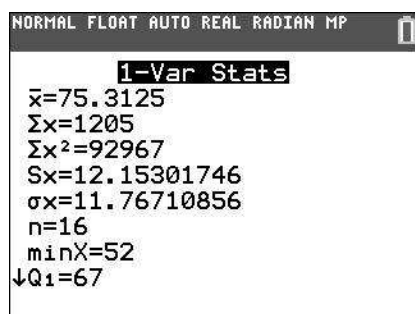
$\min X$ = _____ = _____

$Q1$ = _____ = _____

Med = _____ = _____

$Q3$ = _____ = _____

$\text{Max} X$ = _____ = _____



The calculator will NOT give you mode and range. You must find these by hand!

2

The first-round bowling scores of a group of bowlers is given below.

214, 224, 195, 236, 208, 252, 157, 240, 270, 229, 206, 268, 210, 174, 242, 195

a) Find each value below.

Mean:

Median:

Mode(s):

Lower Extreme:

Upper Extreme:

Range:

Lower Quartile:

Upper Quartile:

Interquartile Range:

b) Construct a box-and-whisker plot of the data on the number line below.

**3**

Biologists are studying the weight of Albacore tuna caught off the coast of Washington State. A sample of tuna is taken and their weights, in pounds, are given below:

36, 22, 41, 18, 36, 27, 31, 38, 25, 29, 22, 34, 48, 20, 12, 19, 35, 32, 41, 50

a) Is the mean or median the greater measure of center?

b) Construct a box-and-whisker plot of the data on the number line below.



c) What is the range of this data set?

d) What percent of this data lies at or below a weight of 37 pounds?

4

A doctor is researching the time it takes for people to fall asleep at night. He recorded the time it takes for each of his subjects to fall asleep, in minutes, and compiled the data set shown below.

22, 8, 19, 14, 25, 95, 32, 7, 14, 20, 18, 10, 22, 17, 27, 16

a) Find the mean and median amount of time that it takes subjects to fall asleep.

b) Are there any outliers in this data set? If so, which value?

c) Determine the mean and median of this data set if this outlier is removed.

d) Did the outlier make a significant difference in the mean and median?