Statistic	s Vocabul	ary Not
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Algebra 1 ~ U6 Day 1	Departing	Example
Terms	Describe	Mean
Measures of		Median
Center		Mode Most accured
Genter	T AVALADA	Find the mean:
Bolt Plan with	The <u>average</u> of	5+4+2+6+3=20
Mean	a data set, tound by adding	20-4
X	the number of data points	5.
	The middle	
1. 1.	value of a data set: 50% of	80=Median
Median	the data is less than this	
	value, and <u>50%</u> is greater	65, 65, 70, 75, 80, 80, 85, 90, 95, 100
Measures of	Than it	
Variability		Range
(spread)		Interquartile Range (IQR)
(op.ouu)	The diffevenu between	
Range	the highest and	65, 65, 70, 75, 80, 80, 85, 90, 95, 100
innigo	<u>lowest</u> numbers in	Range = highest $\#$ – lowest $\#$ in the datase
	the data set.	Range = $100 - 65 = 35$
		70 _
	A data value that is much	60 — 50 —
Outlion	more than or	40 -
Outlief	rest of the data in a data	20
	set.	
(LOMON)	The value that identifies	0 2 4 5 8 10 12 14
Eirct	the ININ/PY 25% of	Q median of all data,
FIISt	the data; the median of	65 65 70 JE 90 00 05 00 05 100
Ouartile	the IDWEV half of	05, 05, 10, 5, 80, 80, 85, 90, 95, 100
·	the data set; written as Q1.	first quartile
(upper)	Value that identifies the	madian of all data no
(opper)	UPPEN 25% of the	second quartile
Third	data; the median of the	65 65 70 75 00 00 05 m
Quantila	Upper half of the	00, 00, 10, 70, 80, 80, 80, 90, 90, 100
Quartile	data set; 75% of all data is	median of upper part.
	less than this value;	third quartile
and the second	written as Q3.	

		$(0)$ $\pi$ + $0$ $\pi$
	T range	$IQR = Third Quartile (Q_3) - First Quartile (Q_1)$
Interquartile Range	The <u>farter</u> between the third and first quartiles; 50% of the data is contained within this range.	IQR from above = 90-70=20 (BOX in the box: Whiske
Box Plot	A plot showing the $\underline{min}$ , $\underline{(21)}$ , $\underline{median}$ , $\underline{(32)}$ , and $\underline{max}$ of a data set; the middle 50% of the data is indicated by a box.	Ouartile Quartile Quartile Quartile $(Q_1)$ $(Q_3)$ Minimum Median Maximum 0 10 20 30 40 50 60 70 1 SNUMBER SUMMARY
Dot Plot	A <u>frequency</u> plot that shows the number of times a response occurred in a data set, where each data value is represented by a dot.	
Histogram	A <u>frequency</u> plot that shows the number of times a response or range of responses occurred in a data set. The bars are <u><math>+ puching</math></u> and will be the <u>Bame</u> across the chart.	

Statistical Measures Not 1. Given the following data for temperatures in the first two weeks of February 2014. 51, 44, 28, 25, 17, 71, 62, 32, 37, 54, 47, 31, 60, 39



data - Ll

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## **Statistics Measures and Graphs Practice**

1. Use the box and whisker plot for questions 1-8.



Name:

Period:

- i. What percentage of data is located below 60 in? 25%
- 2. Analyze the given histogram which displays the ACT composite score of several randomly chosen students.



- a. How many students are represented by the histogram? 23
- b. How many student scores fall between 15 and 25? (a+5=1)
- c. How many students have scores less than 30? 4+5+6+5=20
- d. How many students have scores between 10 and 15 and between 20 and 25? 5
- e. Can you determine how many students scored a 20? Why or why not? NO, histograms show ranges

 Analyze the given dot plot which displays the number of home runs by each of the members of the Atlanta Braves team during the month of April and answer the questions accordingly.



a. How many players are on the team?  $|| \varphi$ 

b. How many players hit more than 2 home runs?  $\downarrow \varphi$ 

c. How many players hit at least 1 home run? 12

d. How many players hit more than 1 and fewer than 9 home runs? 7

e. How many players scored more than 9 home runs? D

f. How many players hit more than 1 and fewer than 5 home runs? 3

g. How many players scored less than 3 home runs? 10

4. Mrs. Warren's recent Algebra 1 test had the following scores:

90,95,100,70,85,65,90,80,65,70,75,80,85,80,60,80,75,85



## RVICE

e Georgia ncelable L ogram that andard Ur ploma, or ofessiona ostsecond eorgians eorgia an buard to p 1) The heights (in inches) of eight tomato plants are:

36, 45, 52, 40, 38, 41, 50, and 48

Find the range, mean, median, and mode(s) of the tomato plant heights.

 $\bar{x} = 43.75$  Range: 16 Median: 43 Mode:

2) You and your friend have a friendly competition going on about the scores on your math quizzes. Both of your scores for the first five quizzes are given below.

> Your quiz scores: 18, 16, 19, 15, 17 Friend's quiz scores: 20, 20, 13, 12, 17

a) Find the mean, median, and mode of both sets of data.

$$y_{OU}: \bar{x} = 17$$
Median: 17Mode: 20Friend:16.41720b)Do you or your friend have the higher mean? Who has the highest median?

- You have higher mean? Who has the highest median? same
- Below are percentages of all doctorates earned by men and women between 1980 and 3) 1989.

College	Women	Men
Boudoin	45	48
Carleton	38	61
Grinnell	34	47
Middlebury	36	46
Oberlin	20	34
Swarthmore	34	46

- a) What is the difference between the means of the percentages of doctorates earned by women and men? Women:  $\bar{x} = 34.5$  Men:  $\bar{x} = 47$
- b) What is the difference in the ranges of the percentages of doctorates earned by men and women? Range: Women: 25 Range: Men: 27 (= 45-20 0 34Range: Men: 27
- c) How much higher is the median of the percentage of doctorates earned by men than the median of the percentage earned by women? Median: Women: 35 Median: Men: 46.5
- 4) Suppose the students in a class received the following test scores:

85, 90, 65, 75, 90, 95, 80, 80, 70, 85, 85, 100, 60, 75, 80, 85, 90

Create a box-and-whisker plot for this data. 55 60 65 70 75 80 85 90 95 100 105

Min: Median: Q3: 91 Max: Ir

5) A research scientist recorded the following readings for an experiment she was working on: 173, 206, 179, 257, 198, 251, 239, 246, 295, 181, 261





6) Identify the requested values by analyzing the box and whisker plots below.
a) b)



0 1 2 3 4 5 6 7 1.5 2.5 4.1 4.5 7.0	8
Min: $1.5$ Q1: $2.5$ Median: $1.1$ Q3: $4.5$	

Max:

-

Range: \_\_\_\_\_ IOR:

7) Which box and whisker plots has the greatest IQR?



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