

Study Guide

1. What is the difference between a measure of center and a measure of spread?

What are examples of each?

2. How can you determine if a sample is biased or unbiased?

3. Find the following using the table below:

Mean:

Median:

Mode:

Range:

Mean Absolute Deviation:

Number of Books			
1	3	15	24
37	55	39	40
35	28	20	0

4. Out of 350,000 registered voters, a random sample was taken. Their voting preferences are listed in the table. Use this information to predict how many out of the 350,000 would vote for Sanchez. _____

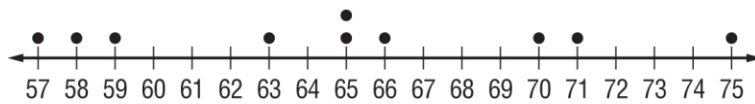
Candidate	Number of Voters
Sanchez	45
Ledo	30
Carroll	15
Undecided	10

5. What is the size of the sample in #4? _____
6. A survey in one middle school showed that 2 out of 9 students help cook meals at home. Predict how many out of the 774 students in the school help cook meals at home.

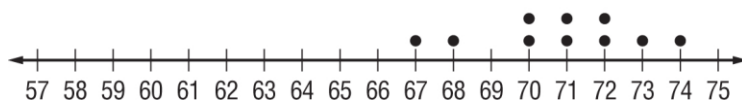
7. Mrs. Melendez wants to know if her neighbors want to hold a neighborhood garage sale. She walks through the neighborhood and asks the people she sees. Because three of the 10 people she saw said *yes*, she concludes that 30% of the people in the neighborhood will want to hold a garage sale. Is this conclusion valid? Justify your answer.
8. A survey in one middle school showed that 3 out of 5 students enjoy biking on the weekends. Predict how many out of the 485 students in the school would say they enjoy biking on the weekends.

9. The dot plots show the resting heart rates for Katie and Danielle for 10 days.

Katie's Heart Rate (bpm)



Danielle's Heart Rate (bpm)



How do the means compare?

How do the medians compare?

10. The quiz grades of several children were recorded at LMMS as shown below.

Sixth grade: 89, 95, 100, 99, 75

Seventh grade: 85, 89, 88, 92, 95

Compare the variability by comparing the mean absolute deviations of the quiz grades.

11. Given the following data sets, determine which sample has the greatest interquartile range.

	Sample A	Sample B	Sample C	Sample D
Minimum	30	10	22	38
Q_1	35	15	32	48
Median	50	35	47	63
Q_3	65	55	67	93
Maximum	75	75	77	98

12. The tables below show the number of video games sold at 2 stores.

Store A		
18	24	25
26	26	27
27	30	30
31	33	35
36	37	

Store B		
22	23	25
27	28	28
33	35	35
36	40	41
41	44	

How do the medians for the number of video games sold in the two stores compare?

13. Antwan wants to know how often the residents in his neighborhood go to the beach. Which sampling method will give valid results?

- A. He asks all the members of the swim team at his school.
- B. He asks all his family members and friends.
- C. He posts a question on a community Web site.
- D. He asks three random households from each street in his neighborhood.

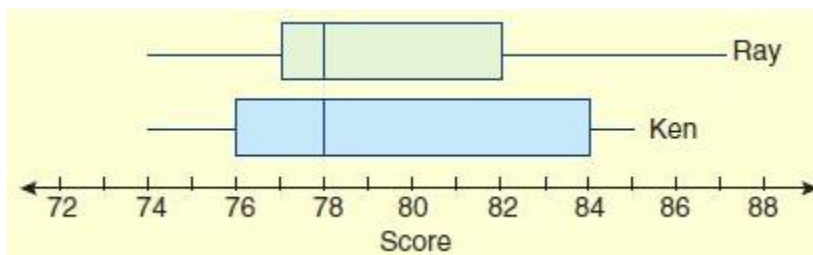
14. A survey was conducted on the prices of electronics form 100 randomly selected shoppers in two different stores. Half of the shoppers were in Best Buy and half in Target. The following data was collected from the surveys.

	Best Buy	Target
Mean	\$200	\$186
Median	\$190	\$165
Mode	\$199	\$155
Range	\$375	\$512

Based on these samples, what generalization can be made?

- A. The range of electronic prices is higher in Best Buy than in Target.
- B. The median electronic price is higher in Target than in Best Buy.
- C. The total prices of the electronics is higher in Best Buy than in Target.
- D. The most expensive electronic in Target is \$500 while the most expensive one in Best Buy is \$455.

15. The following boxplots show Ken and Ray's quiz scores. Based on the boxplots, which of the following statements about the scores is incorrect?



- A. About half of Ray's scores are between 77 and 82.
- B. All of Ken's scores are at or above 74.
- C. 75% of Ken's scores are below 84.
- D. Half of Ray's scores are above 82.

16. Use the table provided to create box plots. Does this data suggest any differences in the cab ride times compared to car ride times? Create box plots and compute and compare the minimums, medians, and maximums to support your answer.

Cab times (min)	Car times (min)
14	12
18	10
16	13
22	14
25	9
12	17
28	11
16	10
15	8
18	11

