

Module #10 Test REVIEW!

- 1) Students at Edgewood are divided into 5th, 6th, and 7th grades. A random sample of 15 students from each grade is chosen. Describe the sampling method used.
- 2) Basil's owner wants feedback on the items on the menu, so she leaves a customer satisfaction survey on the tables for customers to complete if they wish. Describe the sampling method used.
- 3) The cafeteria staff at Edgewood Middle School want to know if students are happy with the current menu options or if they would like to see some new items added to the menu. The first 40 students standing in line one day are surveyed. The results are shown:

Response	Percent of Votes
No	42.5%
Yes	57.5%

Based on the results, the staff infers that students would prefer some changes to the menu. Describe the sampling method used. Is it biased or unbiased? Is this a valid inference?

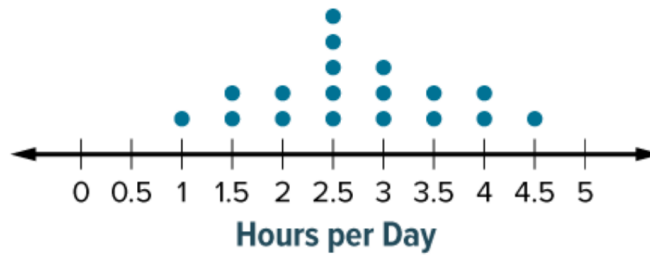
- 4) The manager of the College of Wooster bookstore needs to order school shirts to restock the shelves. In order to determine how many of each kind to purchase, he randomly surveys 50 students and faculty members who plan to buy shirts about which type of shirt they would buy.

Type of School Shirt	Number of Votes
Long Sleeve T-shirt	14
Short Sleeve T-shirt	16
Polo Shirt	8
Sweatshirt	12

The manager plans to order a total of 250 school shirts. Based on the survey results, predict how many sweatshirts he should order.

- 5) Mr. Sexton conducts a random survey of the students at Edgewood and finds that 15% of the students would be interested in a summer creative writing program if it were offered. If there are 720 students in the school, how many of them should Mr. Sexton predict will participate in the program?

- 6) In order to analyze how much time middle school students typically spend playing outside each day during the summer, Mr. Spreng takes 18 random samples of 25 students each. The graph shows the mean of each sample (rounded to the nearest half hour).



What is an appropriate estimation of the mean amount of time spent playing outside each day during the summer?

Find the MAD and interpret the variability in the distribution.

- 7) Woosh wants to determine how often it delivers to areas surrounding Wooster. The table shows data from a random sample of 100 deliveries.

Area	# of Deliveries
Smithville	14
Northwestern	26
Triway	40
Lodi	20

Based on the data, if a driver makes 120 deliveries, how many deliveries will be to the Triway area?

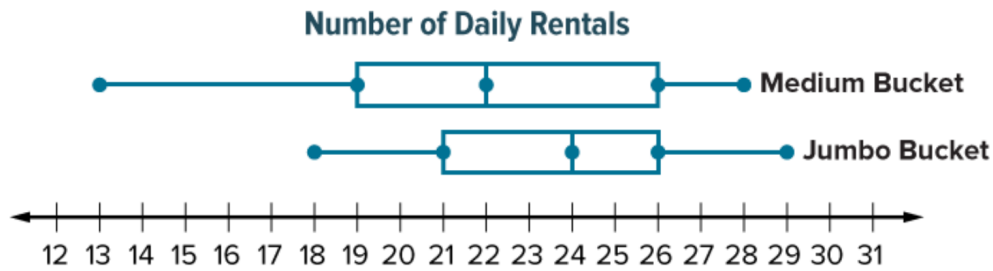
- 8) Mr. Yoder is shopping for a new refrigerator. The double dot plot shows the costs (rounded to the nearest \$50) of several models at two different appliance stores.

Which of the following statements are true about the distribution of data? Select all that apply.



- Both distributions are symmetric.
- The prices at the Appliance Outlet are generally lower than at Appliances & More.
- All prices at Appliances & More are higher than all the prices at the Appliance Outlet.
- The mean price at Appliances & More is higher than the mean price at the Appliance Outlet.
- The prices at Appliances & More have a higher variability than the prices at the Appliance Outlet.

- 9) The double box plot shows the daily number of different size bucket of range balls sold at a driving range.



Find the **MEDIAN** and **INTERQUARTILE RANGE** for each data set.

Which data set shows more variability?

- 10) The table shows the **MEAN** and **MEAN ABSOLUTE DEVIATION** of the number of years of teaching experience from a random sample of teachers at different schools.

	Edgewood Middle School	Triway Middle School
Mean	5	8
MAD	1.4	1.1

Find the number of measures of variability between the mean of each sample, and then make an inference about the mean of each population.