

St. John's University

Assessment Session 1

- Based on the following box plot derived for the Zagat Survey, determine:
 - What is the value of the third quartile for Service?
 - What is the Median for Décor?
 - Determine the most symmetrical distribution
 - What is the value of the first quartile for Food?
 - How many restaurants have a decoration rating less than 21?
 - What is the value of Median for Food?
- What statistic should be used to describe the center if the distribution is severely skewed?
 - Mean
 - Skewness
 - None of the above
- What statistic should be used to describe the spread if the distribution is not severely skewed?
 - Mean
 - Skewness
 - None of the above
- The mean of a distribution is 23.4 and the median is 23.78. Determine the skewness of the distribution. (Circle the correct choice)

Symmetric	Positively Skewed	Negatively Skewed
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- If Francesco's z-score on a test is 3.1, determine the raw score given the fact that the mean is 78 and the variance is 83.5. (Round your answer to 2 decimal places.)
- Using Excel find the Mean, Median, Mode, Variance and Standard Deviation:
1,2,3,4,4,5,5,5,6,6,7,8,9
- Using the NELS DATA, create a pie graph representing the variable Computer Owned by Family in 8th Grade. The slices should show percentage, count, value and category. In addition, using the same variable create a frequency table, and explain the graph and the table in your own words.
- Repeat question 8 for the variable Binged on Alcohol Ever.

10. Using the ZAGAT DATA create a frequency table that will give the number of different type of restaurants. Create a bar graph where the x axis will represent the variable type and the y axis will represent the count. Make sure that the count is also shown inside the bars.
11. Create three descriptive tables using the variables: food, décor and service
12. The distribution of heights of women aged 20 to 29 is approximately Normal with mean 64 inches and standard deviation 2.7 inches. Use the 68–95–99.7 rule to answer the following questions.
- (a) Between what heights do the middle 95% of young women fall?
 - (b) What percent of young women are taller than 61.3 inches?
13. The length of human pregnancies from conception to birth varies according to a distribution that is approximately Normal with mean 266 days and standard deviation 16 days. Use the 68–95–99.7 rule to answer the following questions.
- (a) Between what values do the lengths of the middle 95% of all pregnancies fall?
 - (b) How short are the shortest 2.5% of all pregnancies?
14. Eleanor scores 680 on the mathematics part of the SAT. The distribution of SAT math scores in 2002 was Normal with mean 516 and standard deviation 114. Gerald takes the ACT Assessment mathematics test and scores 27. ACT math scores in 2002 were Normally distributed with mean 20.6 and standard deviation 5.0. Find the standardized scores for both students. Assuming that both tests measure the same kind of ability, who has the higher score?