

Pledge:

1/26/2006
Dr. Lunsford

MATH 171
Quiz 2

Name: _____
20 Points Possible

An efficiency expert observed the number of customers arriving at a restaurant counter during a specified time period for 20 randomly chosen days. Below are the number of customers who arrived during the period for each of the 20 days. For your convenience the data is listed in ascending order:

13, 15, 15, 18, 18, 19, 20, 20, 20, 20, 21, 21, 21, 22, 22, 22, 23, 23, 23, 24

(a) This data is (circle one): Quantitative Qualitative (1 point)

(b) Below is a frequency table for the data using 7 classes. I have given you the class boundaries using the convention we discussed in class. Please note that the variable X is the number of customers who arrive. Please use the data above to complete the table. (4 points)

Class Limits For X	Frequency	Percent Frequency
$12 \leq X < 14$		
$14 \leq X < 16$		
$16 \leq X < 18$		
$18 \leq X < 20$		
$20 \leq X < 22$		
$22 \leq X < 24$		
$24 \leq X < 26$		

(c) Use the table in Part (b) to graph a percent frequency histogram (i.e. graph the percent frequency on the vertical axis). Be sure to label your axes! (4 points)



(d) Find the sample mean, sample standard deviation, and the five number summary for this data. Clearly indicate your answers. (3 points)

(e) Draw a box plot of the data. Please be sure to clearly label your axis for the box plot. (4 points)

(f) What percent of the days in the sample have at least 20 customers arriving during the specified time? (2 points)

(g) Is the question in part (f) asking you for an inferential or descriptive statistic? (1 point)

(h) Which distribution shape below best describes the shape of the data in the histogram you drew in part (c)? Circle one please. (1 point)

Symmetric/Unimodal Uniform Right-Skewed Left-Skewed Bimodal