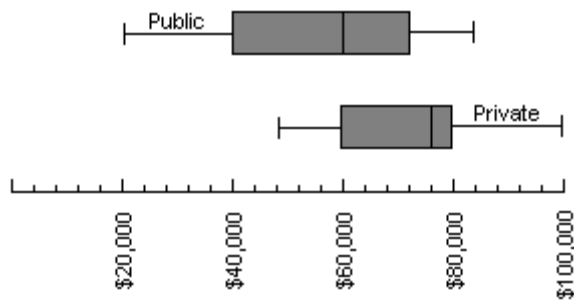


1) The box plots represent a comparison of the annual salaries of a group of public and private employees



- a. What is the median of the public employee salaries?
- b. What percent of the private employee salaries lie above the public employee median?

2) The table lists blood types in a sample of hospital patients. Construct a bar graph for the relative frequency data.

Type	Frequency
O	22
A	19
B	6
AB	3

3) The midterm test scores for the seventh-period typing class are listed below. Construct an ordered stem-and-leaf plot.

85	77	93	91
88	59	74	83
74	65	68	97
85	72	63	79

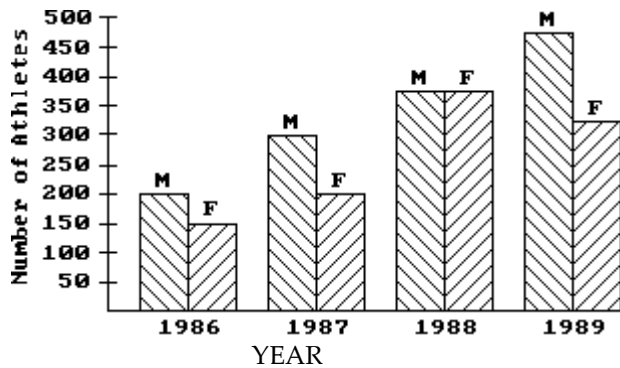
4) On a math test, the scores of 24 students were as follows.

98	79	72	62	72	72	98	85	72	64	83	79
79	83	72	79	93	72	79	85	79	83	85	62

Complete the frequency/relative frequency table for the data given.

Scores	Frequency	Relative Frequency
60 - 69		
70 - 79		
80 - 89		
90 - 99		

5) This double-bar graph shows the number of male (M) and female (F) athletes at a university over a four-year period.



- Which year had the greatest number of female athletes? _____
- Which year had the smallest number of male athletes? _____
- How many students were involved in athletics in 1987? _____
- What is the only year in which the number of female athletes declined from its previous value? _____
- What percentage of all students involved in athletics in 1987 was male? (Round to the nearest whole percent.) _____
- Which year had the same number of male and female athletes? _____

6) The National Education Association collects data on the number of years of teaching experience of high-school teachers. A sample taken this year of 19 high-school teachers yielded the following data on number of years of teaching experience.

16 25 1 34 15
 7 18 9 20 14
 17 19 16 10 21
 30 14 38 18

- List the Five Number Summary.
- Construct a Box-and-Whisker graph of the data.

7) Given: 8, 7, 5, 3, 12, 8, 8, 7, 3, 12, 8, 5, 14, 3, 8, 8, 5, 7, 3, 8

- Find the mode
- Find the median
- Find the mean.

8) On a math test, the scores of 24 students were as follows.

99 71 76 61 76 87 99 87 76 66 83 71
 71 83 90 71 83 76 71 87 71 83 87 52

SHOW ALL WORK

- Using the method shown in class, construct a grouped frequency table with 6 classes of equal width beginning with the lowest test score. Be sure to include both tallies and frequencies.
- Using your frequency table, construct a corresponding histogram of the data.

9) The weight in pounds of ten randomly-selected football players are:

245 304 310 251 195 185 235 264 315 196

- Find the median of these weights.
- Find the mean of these weights.
- Find the range of these weights.
- Find the standard deviation of these weights.
(Round to 2 decimal places.)

SHOW ALL WORK
FOR EACH PART.

10) The following are the scores of 20 students who took a calculus exam:

Score	Frequency
76	5
82	2
85	3
90	4
92	3
95	3

- Find the mean _____
- Find the standard deviation
(Round to 2 decimal places.) _____

11) Your cable bill increased last year. For the first 5 months your bill was \$28.89 each month. For the remaining 7 months it was \$30.89 each month. Find the mean amount of your cable bill for the year. Round to the nearest cent.

12) Crystal was pregnant 270 days and 261 days for her first two pregnancies. In order for Crystal's average pregnancy to equal a national average of 265 days, how long must her third pregnancy last?

13) A teacher allows the students to each "throw out" their lowest test score in order to increase their overall grade. The original mean score of 5 tests is 71.6. After the removal of the lowest test, the mean score becomes 76.5. What is the score of the removed test?

14) The office manager at an accounting firm counted the number of employees that were in the coffee room each hour during the work week. The results are summarized in the following bar graph.



- Find the mode _____
- Find the median _____
- Find the mean _____

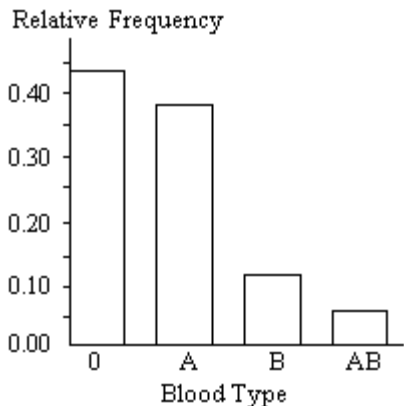
- 15) Assume that a distribution has a mean of 23 and a standard deviation of 7. What percentage of the values in the distribution do we expect to fall below 9? Use the 68-95-99.7 % Rule.
- 16) Assume that a distribution has a mean of 22 and a standard deviation of 6. What percentage of the values in the distribution do we expect to fall between 16 and 22? Use the 68-95-99.7 % Rule.
- 17) Assume that a distribution has a mean of 29 and a standard deviation of 4. What percentage of the values in the distribution do we expect to fall between 29 and 37? Use the 68-95-99.7 % Rule.
- 18) Use a table to find a z-score that fits the given conditions. 48% of the area under the standard normal curve is above the score.
- 19) Use a table to find a z-score that fits the given conditions. 22% of the area under the standard normal curve is below the score.
- 20) Use a table to find the percentage of the area under the standard normal curve between the two values. Round your answer to the nearest tenth. $z = 0$ and $z = -2.62$
- 21) Find the missing value.
113 = mean
8 = standard deviation
104 = raw score
_____ = z-score
- 22) Find the missing value.
79 = mean
12 = standard deviation
_____ = raw score
-1.49 = z-score
- 23) Use a table to find the percentage of the area under the standard normal curve between the two values. Round your answer to the nearest tenth. $z = 1.06$ and $z = 1.87$
- 24) Assume that the distribution of wait times spent by women in a restroom line at a sporting event is 6.8 minutes with a standard deviation of 1.5 minutes. For this distribution, find a raw score that corresponds to a z-score of 1.9.
- 25) Assume that math SAT scores are normally distributed with a mean of 500 and a standard deviation of 100. If you scored 560, what percentage of those taking the test scored below you?

Answer Key

Testname: M110 CHAP15 REVIEW

- 1) a. \$60,000
b. 75%

2) Blood Types of Patients



3) Midterm Test Scores

5	9	
6	3 5 8	
7	2 4 4 7 9	
8	3 5 5 8	
9	1 3 7	7/6 means 76%

4) Math Test Scores

Scores	Frequency	Relative Frequency
60-69	3	1/8
70-79	12	1/2
80-89	7	7/24
90-99	2	1/12

- 5) a. 1988
b. 1986
c. 500
d. 1989
e. 60%
f. 1988

- 6) a. 1, 14, 17, 21, 38
b. Box-and-Whisker graph not available

- 7) a. mode = 8
b. median = 7.5
c. Mean = 7.1

8) a. Math Test Scores

Class	Tallies	Frequency
52 - 59		1
60 - 67		2
68 - 75		6
76 - 83		8
84 - 91		5
92 - 99		2

- b. Histogram not available

- 9) a. 248 lb
b. 250 lbs
c. 130 lbs
d. 48.71 lbs

- 10) a. Mean = 86
b. Standard deviation = 7.07

11) \$30.06

12) 264 days

13) 52%

- 14) a. 6
b. 5
c. 3.8125

15) 2.5%

16) 34%

17) 47.5%

18) 0.05

19) -0.77

20) 49.6%

21) -1.125

22) 61.12

23) 11.4%

24) 9.65

25) 72.6%