

Examples for Chapter 2– Descriptive Statistics

Math 1040-1

Section 2.1

1. Make a frequency distribution for the following data, using 5 classes:

5 10 7 19 25 12 15 7 6 8
17 17 22 21 7 7 24 5 6 5

2. Add the midpoint of each class, the relative frequency, and the cumulative frequency to previous frequency table.

3. Construct a frequency histogram for the data considered before.

4. Construct an ogive for the data considered before.

Section 2.2

1. Make a stem-and-leaf plot for:

5 10 7 19 25 12 15 7 6 8
17 17 22 21 7 7 24 5 6 5

2. Sketch a dot plot for the above data.

3. Construct a pie chart for the following data:

Causes for lateness:

<u>Cause</u>	<u>Frequency</u>
Snoozing after alarm goes off	19
Car trouble	5
Too long over breakfast	13
Last-minute studying	20
Finding something to wear	8
Talking too long with roommate	9
Other	3

4. Construct a Pareto chart for the above data.

5. Construct a scatter plot for the following data:

Number of officers on duty in a Boston city park	Number of muggings that day
10	5
15	2
16	1
1	9
4	7
6	8
18	1
12	5
14	3
7	6

6. Construct a time series chart for Salt Lake City's average monthly precipitation (in inches):

Month	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Precipitation	1.25	1.25	1.79	1.99	1.95	0.98	0.61	0.69	1.21	1.52	1.45	1.41

Section 2.3

1. Find the mean, median, and mode of the following data set:

5 10 7 19 25 12 15 7 6 8
17 17 22 21 7 7 24 5 6 5

2. At the end of the semester, your highest 4 quiz scores, which are worth 5% each, were 76%, 82%, 95%, and 92%. Your highest 2 midterm exam scores, which are worth 20% each, were 78% and 82%. Your final exam score, worth 40%, was an 80%. What is your overall score for this course?

3. Approximate the mean of the following frequency distribution:

Class	Frequency
5–9	10
10–14	2
15–19	4
20–24	3
25–29	1

Section 2.4

1. Calculate the range, sample variance, and sample standard deviation for the following data from a sample:

10 12 12 17 19 20

2. The weight of 64 female college athletes is roughly bell-shaped with a mean $\bar{x} = 133$ and standard deviation $s = 17$. In what range do about 95% of the weights fall?

Section 2.5

1. Find the quartiles and IQR of the following data:

(a) 100 102 102 102 102 106 108

(b) 7 10 11 12 13 14 16 17

2. Find the five-number summary and sketch the box-and-whisker plot for: 7 10 11 12 13
14 16 17

3. For healthy females, the red blood cell count (RBC, in millions per cubic millimeter of whole blood) has mean 4.8 and standard deviation 0.3. Is a RBC of 4.6 considered unusual?