

Section 2-1: Frequency Distributions and Their Graphs

\*Construct a frequency distribution including limits, midpoints, relative frequencies, cumulative frequencies and boundaries.

\*Answer questions about a frequency distribution or its graph.

\*Construct a frequency histogram, frequency polygon, relative frequency histogram, or ogive from a given data set or frequency distribution.

\*Answer questions about a graph.

Use the table below to answer questions 1 -9.

Daily Low Temperature ( $F^{\circ}$ )	Frequency	Midpoints	Relative Frequency	Cumulative Frequency	Class Boundaries
35-39	1				
40-44	3				
45-49	5				
50-54	11				
55-59	7				
60-64	7				
65-69	1				

1. Identify the class width.
2. Complete the remaining columns.
3. Create a frequency histogram. Identify the class with the least and greatest frequency.
4. Create a relative frequency histogram.
5. Create a frequency polygon.
6. Create an ogive. Which class has the largest increase in frequency?
7. What percent of the days had a low temperature of  $50^{\circ}$  or higher?
8. What did you do to answer #6?
9. How many days had low temperatures in the 40's?
10. What did you do to answer #8?

\*Be able to explain advantages/disadvantages when using the above graphical displays (ex: why choose stem-and-leaf plot over histogram).

Use the stem-and-leaf plot below for questions 11-13.

Key  $1|7 = 1.7$

0	6
1	1 7 9
2	2 6
3	2 4 7 8
4	1 5 6 9 9
5	3 6 8
6	2 4 4 5 7
7	
8	5 6

11. What is the minimum and maximum value in the stem-and-leaf plot?
12. Write the data set represented by the stem-and-leaf plot.
13. Create a dot plot using the data in the stem-and-leaf plot.

Use the data below to answer questions 14 – 16.

The table below shows the responses of a poll of adults on June 16, 2006 about whether America should keep the penny.

Response	# of people
Yes	58
No	148
Not Sure	44

14. What percent said “yes” to keeping the penny?
15. Create a pie chart using the data above.
16. Create a Pareto chart using the responses above.

17. Use a time series chart to display the data below.

Number of Collision Between Wildlife and Aircraft

<u>Year</u>	<u>Collisions</u>
1990	1285
1992	1383
1994	2775
1996	6323
1998	5204
2000	4091
2002	5622
2004	4990
2006	5457