

2.1 Summarizing Data with Frequency Tables

Frequency Distribution is a table that shows classes or intervals of data entries with a count of the number of entries in each class.

Lower Class Limits are the smallest numbers that can actually belong to the different classes.

Upper Class Limits are the largest numbers that can actually belong to the different classes.

Class width is the difference between two consecutive lower class limits when using a frequency distribution. To find the class width when using data values:

$$(high - low) / \# \text{ of classes}$$

Class Marks are the **midpoints** of each class. Add the lower class limit to the upper class limit and divide the sum by 2.

Class Boundaries are the numbers used to separate classes, but without the gaps created by the class limits. Find the size difference of the gap between the upper class limit of one class and the lower class limit of the next class. take half of that difference and add it to each upper class limit and subtract it from each lower class limit.

$$\text{Relative Frequency Table} = \frac{\text{class frequency}}{\text{sum of all frequencies}}$$

answer can be a decimal or percent

Cumulative Frequency Table is the sum of that class and all previous classes.

Histogram is a form of bar graph. When making a histogram, include a title, label both axes, use the class boundaries on the x-axis, and show breaks on the axes if you do not start at 0.

Ogive is a line graph that displays the cumulative frequency of each class at its upper class boundary. The upper boundaries are marked on the horizontal axis and the cumulative frequencies are marked on the vertical axis.

Make a frequency distribution for the following cell phone prices. Use 5 classes to make the distribution. Then construct a histogram using the given information.

95	122	108	86	103	82
77	75	112	118	87	102
104	116	85	122	87	100
104	97	107	69	78	125
109	99	105	99	101	85

