Analyzing Quantitative Data

Histograms

1. Divide the range of data into classes of equal width.
2. Find the count (*frequency*) or percent (*relative frequency*) of individuals in each class.
3. Label and scale your axes and draw the histogram. The height of the bar equals its frequency. Adjacent bars should touch, unless a class contains no individuals.

Percent of foreign-born residents by state

|  |
| --- |
| **Frequency Table** |
| **Class** | **Count** |
| 0 to <5 |  |
| 5 to <10 |  |
| 10 to <15 |  |
| 15 to <20 |  |
| 20 to <25 |  |
| 25 to <30 |  |



Using histograms wisely

1. Don’t confuse *histograms* and *bar graphs.*
2. Don’t use counts (in a frequency table) or percents (in a relative frequency table) as data.
3. Use percents instead of counts on the vertical axis when comparing distributions with different numbers of observations.
4. Just because a graph looks nice, it’s not necessarily a meaningful display of data.

Example #2



1. Create a histogram for these scores (hint: use 10 as your class size)
2. Many people believe that IQ scores follow a normal distribution or “bell curve”. Does your histogram support this?