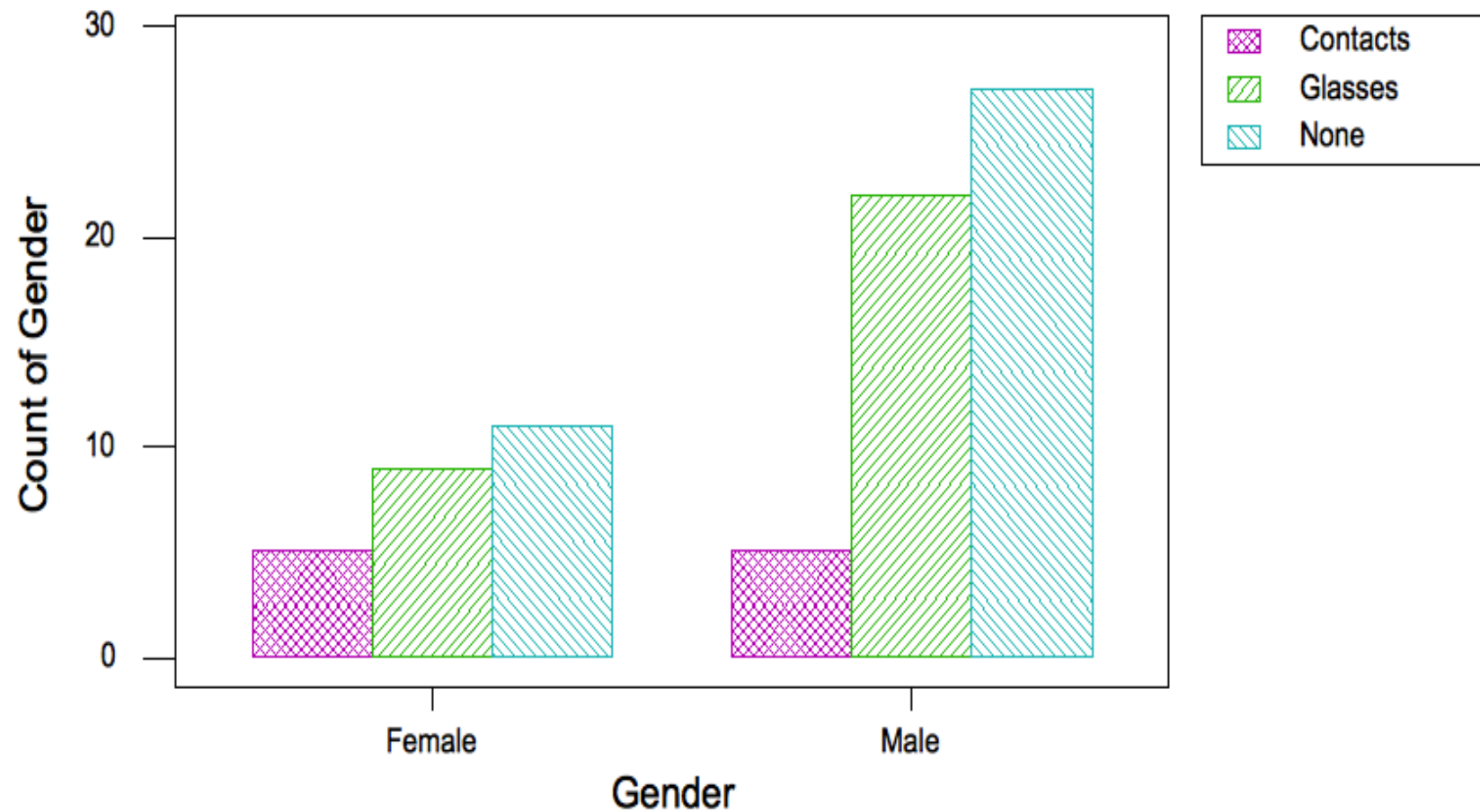# What can you say about this?

Stem and Leaf Graphs
Below are weights of 25 female students

```
150    140    155    195    139
200    157    130    113    130
121    140    140    150    125
135    124    130    150    125
120    103    170    124    160
```

GPA Example

GPA of 20 students

3.09   2.04   2.27   3.94   3.70   2.69
3.72   3.23   3.13   3.50   2.26   3.15
2.80   1.75   3.89   3.38   2.74   1.65
2.22   2.66

How would the stem-leaf graph look like?

What value occurs most often?

```
4 | 4
5 | 7              Stem:    Tens digit
6 | 008            Leaf:    Ones digit
7 | 4455579
8 | 2479
9 | 014
```
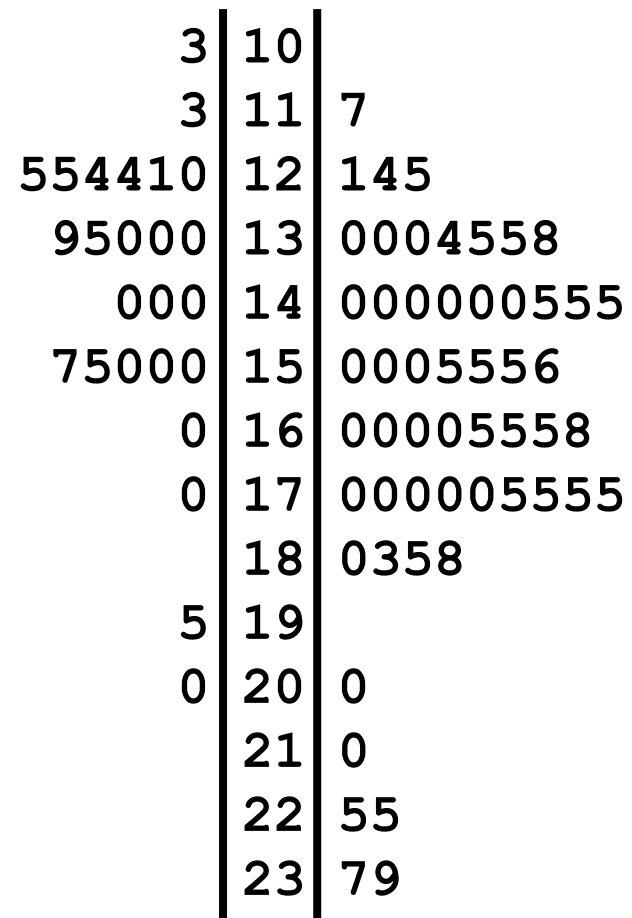
Comparative Stem and Leaf Diagram

- When we want to compare two groups back to back stem and leaf graphs are very useful.

- Ex: Weights of males and females

|		
3	10	
3	11	7
554410	12	145
95000	13	0004558
000	14	000000555
75000	15	0005556
0	16	00005558
0	17	000005555
	18	0358
5	19	
0	20	0
	21	0
	22	55
	23	79

Frequency distributions and Histograms

- Ex 3.14

- Get the data

- Find the min and max

- Draw a histogram

- Now let Maple do a histogram for that data.

Look for a central or typical value, extent of spread or variation, general shape, location and number of peaks, and presence of gaps and outliers.
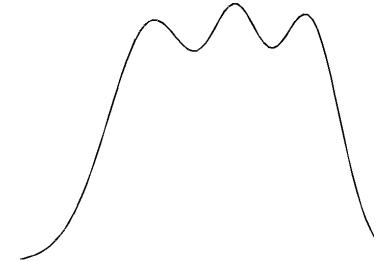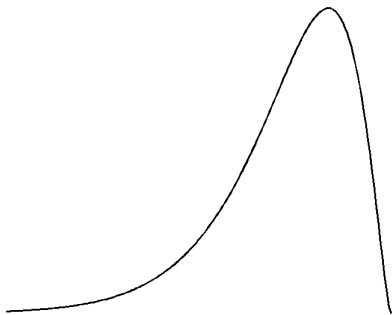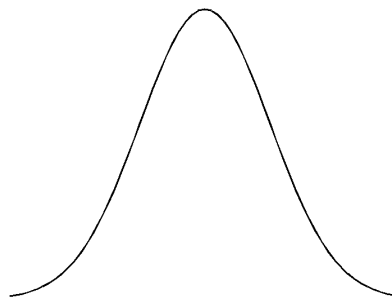
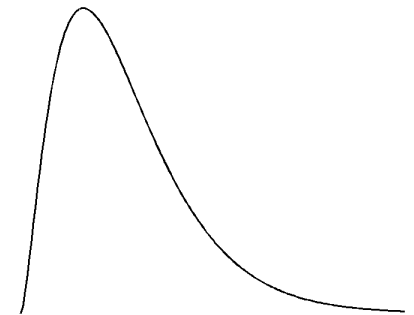# General Shapes of Histograms
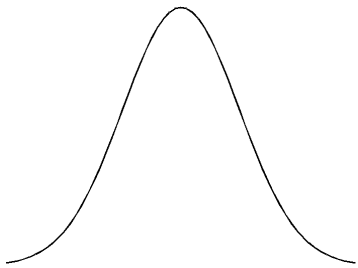
Unimodal
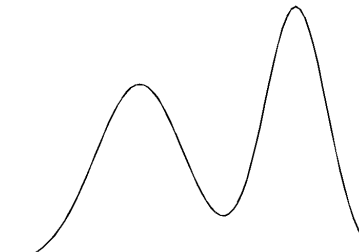
Bimodal

Multimodal

Skew negatively

Symmetric

Skew positively

Displaying Bivariate Numerical Data
Scatterplots

# of absences	Final grade(%)
6	82
2	86
15	43
9	74
12	58
5	90
8	78

Time series plot

Data sets consists of measurements collected over time at regular intervals so that we can learn about change over time are mostly displayed in time series plots.

Examples: Stock prices...
Time series plot is constructed as scatterplots.