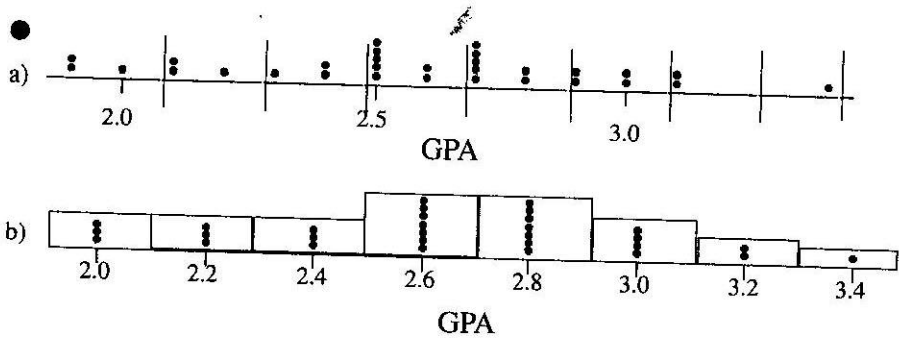
**Grade Point Averages of 30 Bucknell University Freshmen**

| | | | | |
|---|---|---|---|---|
| 2.0 | 3.1 | 1.9 | 2.5 | 1.9 |
| 2.3 | 2.6 | 3.1 | 2.5 | 2.1 |
| 2.9 | 3.0 | 2.7 | 2.5 | 2.4 |
| 2.7 | 2.5 | 2.4 | 3.0 | 3.4 |
| 2.6 | 2.8 | 2.5 | 2.7 | 2.9 |
| 2.7 | 2.8 | 2.2 | 2.7 | 2.1 |




**Definition** A **relative frequency histogram** for a quantitative data set is a bar graph in which the height of the bar shows "how often" (measured as a proportion or relative frequency) measurements fall in a particular class or subinterval. The classes or subintervals are plotted along the horizontal axis.

To construct the relative frequency histogram, plot the class boundaries along the horizontal axis. Draw a bar over each class interval, with height equal to the relative frequency for that class. The relative frequency histogram for the GPA data, Figure 1.15, shows at a glance how GPAs are distributed over the interval 1.9 to 3.5.

**Relative Frequencies for Data of Table 1.9**

| Class | Class Boundaries | Tally | Class Frequency | Class Relative Frequency |
|---|---|---|---|---|
| 1 | 1.9 to <2.1 | III | 3 | 3/30 |
| 2 | 2.1 to <2.3 | III | 3 | 3/30 |
| 3 | 2.3 to <2.5 | III | 3 | 3/30 |
| 4 | 2.5 to <2.7 | 𝍸 II | 7 | 7/30 |
| 5 | 2.7 to <2.9 | 𝍸 II | 7 | 7/30 |
| 6 | 2.9 to <3.1 | IIII | 4 | 4/30 |
| 7 | 3.1 to <3.3 | II | 2 | 2/30 |
| 8 | 3.3 to <3.5 | I | 1 | 1/30 |