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PHYS F211X

(§1.2) Descriptive statistics; (§1.3) Measures of location

Common naming conventions:

- Population size: $N$
- Sample size: $n$
- Sample from two different populations: $n, m$, or $n_1, n_2$
- Data: $x_1, x_2, x_3, \ldots x_n$

Stem-and-leaf displays using R:

```
> x sample(1:50, size=20, replace=TRUE)
> sort(x)
    [1]:  2  2  2  3  9  14  18  19  20  21  21  22  22  29  30  32  32
   [18]:  33  44  47
> stem(x)
```

The sample function generates numbers in the range provided as the first argument, with a size equal to the second argument. sort(x) sorts the values stored in x, and stem(x) does the following:

Each "stem" refers to the highest digits and each "leaf" is the latter digits. This is the stem-and-leaf display for the dataset stored in x:

| Stem | Leaves |
|---|---|
| 0 | 2 2 2 3 9 |
| 1 | 4 8 9 |
| 2 | 0 1 1 2 2 9 |
| 3 | 0 2 2 3 |
| 4 | 4 7 |

Endpoint: 8:44.