

Exploring Data with Graphs and Numerical Summaries | 2

2.2 Describe Data Using Graphical Summaries

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### Graphs for Quantitative Data

- Dot Plot:** shows a dot for each observation placed above its value on a number line
- Stem-and-Leaf Plot:** portrays the individual observations
- Histogram:** uses bars to portray the data

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### Which Graph?

- Dot-plot and stem-and-leaf plot:
  - More useful for **small** data sets
  - Data values are retained
- Histogram
  - More useful for **large** data sets
  - Most compact display
  - More flexibility in defining intervals

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### Dot Plots

To construct a dot plot

- Draw and label horizontal line
- Mark regular values
- Place a dot above each value on the number line

0	210
260	125
220	290
210	140
220	200
125	170
250	150
170	70
230	200
290	180

Sodium in Cereals

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### Stem-and-leaf plots

- Summarizes quantitative variables
- Separate each observation into a **stem** (first part of #) and a **leaf** (last digit)
- Write each leaf to the right of its stem; order leaves if desired

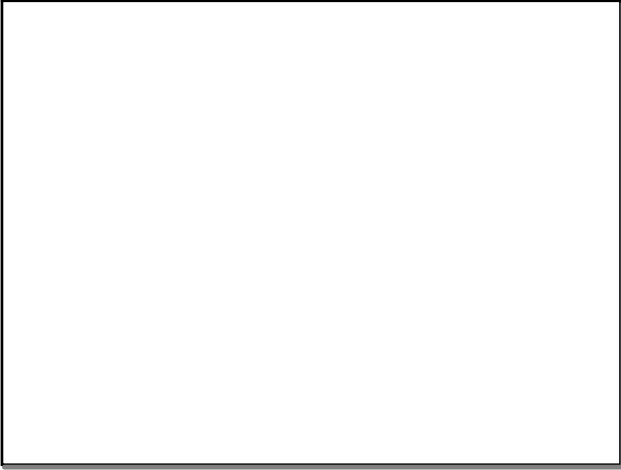
0	210
260	125
220	290
210	140
220	200
125	170
250	150
170	70
230	200
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### Example:

- Create a Stem-and-Leaf Plot for the given data:
- 43, 56, 98, 77, 12, 6, 78, 43, 72, 35, 96, 44, 67, 19, 27, 51, 56, 86, 2, 13, 74, 49, 16, 25, 36, 99.

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