

A data set of 24 entries are listed below.

0.2	0.2	0.3	0.4	1.3	1.6	1.6	2.0
2.1	2.7	3.1	3.3	3.5	3.7	3.9	4.1
4.4	5.6	6.1	6.6	6.7	7.4	8.0	8.3

1. Construct a stem-and-leaf display of the data.
2. Find out the median and the first and the third quartiles of the data.
3. Calculate  $\bar{x}$  and  $s$ . To save time,  $\sum_{i=1}^{24} x_i = 87.1$  and  $\sum_{i=1}^{24} x_i^2 = 465.33$  were calculated for you. [Hint: Remember that  $\sum_{i=1}^n (x_i - \bar{x})^2 = \sum_{i=1}^n x_i^2 - n\bar{x}^2$ .]

*Solution:*

1. Stem-and-leaf.

Decimal point is at the colon

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0 : 2234
1 : 366
2 : 017
3 : 13579
4 : 14
5 : 6
6 : 167
7 : 4
8 : 03

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2.  $Q_1 = 1.6$ ,  $Q_2 = (3.3 + 3.5)/2 = 3.4$ ,  $Q_3 = (5.6 + 6.1)/2 = 5.85$ .
3.  $\bar{x} = 87.1/24 = 3.629$ ,  $s = \sqrt{(465.33 - 24(3.629)^2)/23} = 2.547$ .