Before Class:

☐ Read the objectives on page 339.

☐ Complete the exercises:

1. What is a data item?

2. What is the lower class limit of a grouped frequency distribution?

3. What is the class width of a grouped frequency distribution?

During Class:

☐ Write your class notes. Neatly write down all examples shown as well as key terms or phrases with definitions. If not applicable or if you were absent, watch the Lecture Series (DVD) for this section and do the same (write down the examples shown as well as key terms or phrases). Insert more paper as needed.

| Class Notes/Examples | Your Notes |

Answers: 1) a piece of data 2) the leftmost number in each class 3) the difference between any two consecutive lower class limits
<table>
<thead>
<tr>
<th>Class Notes (continued)</th>
<th>Your Notes</th>
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(Insert additional paper as needed.)
Practice:

☐ Complete any incomplete exercises below. Check and correct your work using the answers and references at the end of this section.

Review this example:
1. Construct a frequency distribution for the data of the age of maximum yearly growth for 35 boys:
   12, 14, 13, 14, 16, 14, 17, 13, 10, 13, 18,
   12, 15, 14, 15, 14, 14, 13, 15, 16, 15, 12,
   13, 16, 11, 15, 12, 13, 12, 11, 13, 14, 14.

Create two columns. One lists all possible data values, from smallest (10) to largest (18). The other column indicates the number of times the value occurs in the sample. The frequency distribution is shown in the table.

Your turn:
2. A random sample of 30 college students is selected. Each student is asked how much time he or she spent on homework during the previous week. The following times (in hours) are obtained:
   16, 24, 18, 21, 18, 16, 18, 17, 15, 21,
   19, 17, 17, 16, 19, 18, 15, 15, 20, 17,
   15, 17, 24, 19, 16, 20, 16, 19, 18, 17

Construct a frequency distribution for the data.
Section 5.6 Frequency Distributions, Histograms, and Stem-And-Leaf Plots

Review this example:
3. Use the data showing statistics test scores for 40 students to construct a stem-and-leaf plot:

82, 47, 75, 64, 57, 82, 63, 93, 76, 68, 84, 54, 88, 77, 79, 80, 94, 92, 94, 80, 94, 81, 67, 75, 73, 66, 87, 76, 45, 43, 56, 57, 74, 50, 78, 71, 84, 59, 76

The plot is constructed by separating each data item into two parts. The first part is the stem and consists of the tens digit. The second part is the leaf and consists of the units digit for a given value.

Your turn:
4. A random sample of 40 college professors is selected from all professors at a university. The following list gives their ages:


Construct a stem-and-leaf plot for the data. What does the shape of the display reveal about the ages of the professors?

Answer

See table on previous page.

Text Ref

Ex 1, p. 339

Answer

Time Spent on Homework (in hours) | Number of Students
---|---
15 | 4
16 | 5
17 | 6
18 | 5
19 | 4
20 | 2
21 | 2
22 | 0
23 | 0
24 | 2

30

Video Ref

Sec 5.6, Ex 5

Next, insert your homework. Make sure you attempt all exercises asked of you and show all work, as in the exercises above. Check your answers if possible. Clearly mark any exercises you were unable to correctly complete so that you may ask questions later. DO NOT ERASE YOUR INCORRECT WORK. THIS IS HOW WE UNDERSTAND AND EXPLAIN TO YOU YOUR ERRORS.