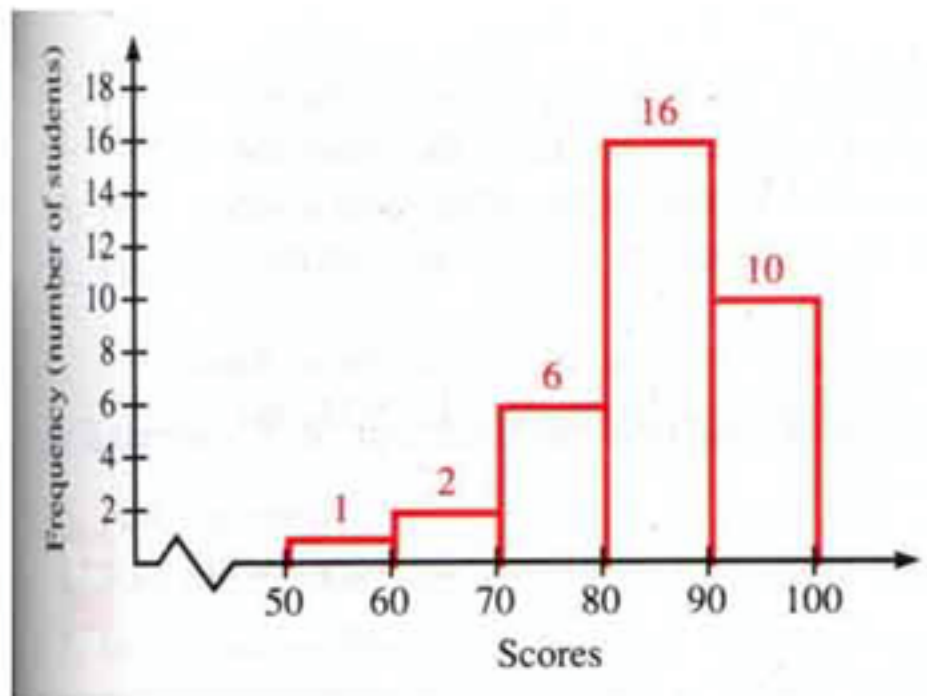


The results of an Algebra Test are shown in the table below and to the left. This table is called a **frequency distribution**, because it shows how many times a given score was obtained.

Score	Number of Students
99	2
98	1
95	3
94	1
93	1
90	2
88	2
87	3
84	5
83	3
82	1
80	2
78	1
75	2
74	1
73	2
68	1
65	1
56	1

A **histogram**, shown below, can be used to display a frequency distribution.



Ex 1) Use the histogram above to answer the following questions:

- 1a) Which interval contains the most test scores?  $80-90$ ; 16  
1b) Which contains the fewest test scores?  $50-60$ ; 1  
1c) How many test scores are 80 or above? 26  
1d) How many test scores are below 70? 3

Ex 2) Draw a **stem and leaf plot** for the test scores above.

Stem	Leaf
5	6
6	5, 8
7	3, 3, 4, 5, 5, 8
8	0, 0, 2, 3, 3, 3, 4, 4, 4, 4, 4, 7, 7, 7, 8, 8
9	0, 0, 3, 4, 5, 5, 5, 8, 9, 9

Numbers used to describe a set of data are called **statistics**.

Three different statistics often used to measure the *central tendency* of a distribution:

**mode:** the number that occurs most frequently

**median:** the middle number of a distribution

**mean:** the arithmetic average of the numbers (the sum of the scores divided the number of scores)

Ex 3) Use the following stem and leaf plot to find the (a) mode, (b) median and (c) mean:

Stem	Leaf
1	8, 9, 9
2	2, 2, 2, 5
3	1, 1, <u>1</u> , 6, 6, 6, 6
4	0, 0, 3, 3, 3

3a) mode: 36

3b) median: 31

3c) mean:  $(\text{sum of scores} / 19) = 31.2$

Ex 4) Find the (a) mode and the (b) median of the following distribution:

5, 6, 6, 6, 8, 10, 13, 13, 13, 16, 18, 20

4a) mode: 6 and 13

4b) median:  $\frac{10+13}{2} = 11.5$