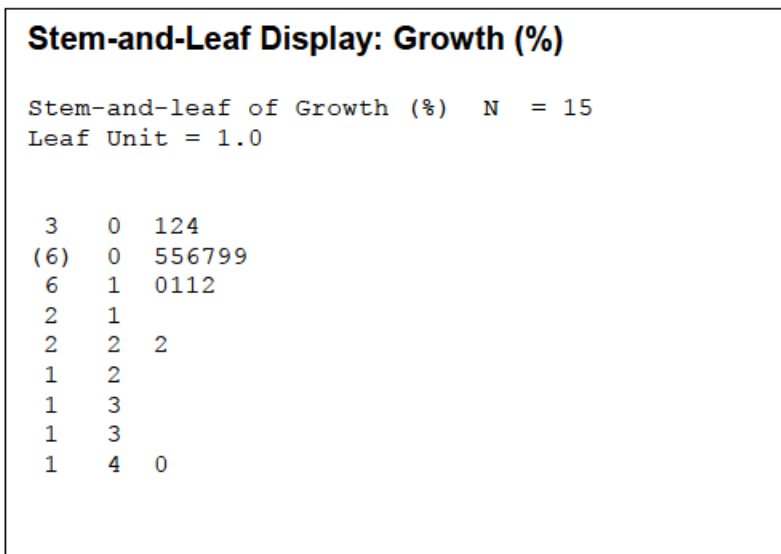


2.5 a.



b. bulk of the profits are below 12%

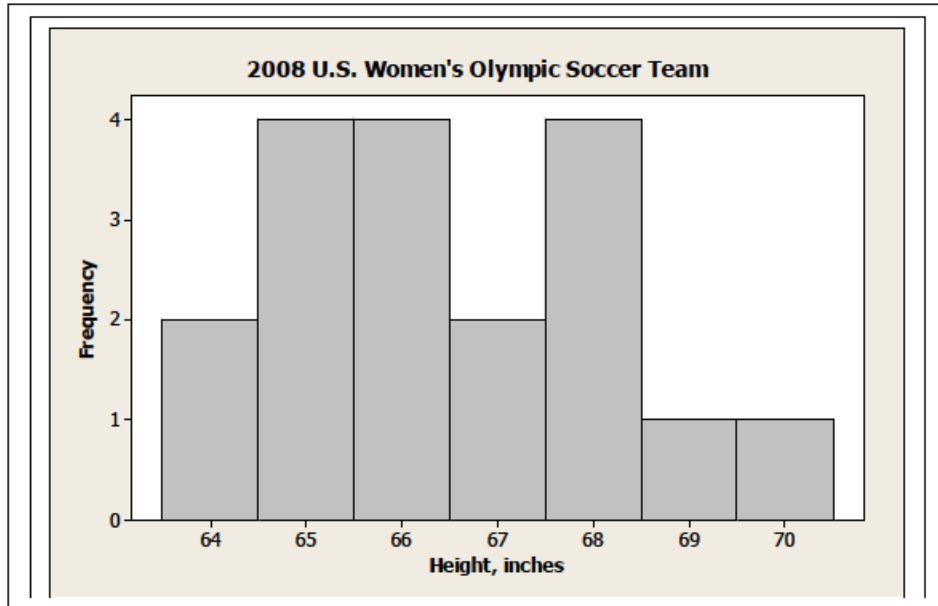
- 2.6 a. The place value of the leaves is in the hundredths place; i.e., 59 | 7 is 5.97.
b. 16
c. 5.97, 6.01, 6.04, 6.08
d. Cumulative frequencies starting at the top and the bottom until they reach the class that contains the median. The number in parentheses is the frequency for just the median class.

Frequency distributions can be either grouped or ungrouped. Ungrouped frequency distributions have single data values as x values. Grouped frequency distributions have intervals of x values, therefore, use the class midpoints (class marks) as the x values. Histograms can be used to show either type of distribution graphically. Frequency or relative frequency is on the vertical axis. Be sure the bars touch each other (unlike bar graphs). Increments and widths of bars should all be equal. A title should also be given to the histogram. Computer or calculator commands to construct a histogram can be found on your Chapter 2 Tech card. Note the two methods, depending on the form of your data.

2.7 a&c.

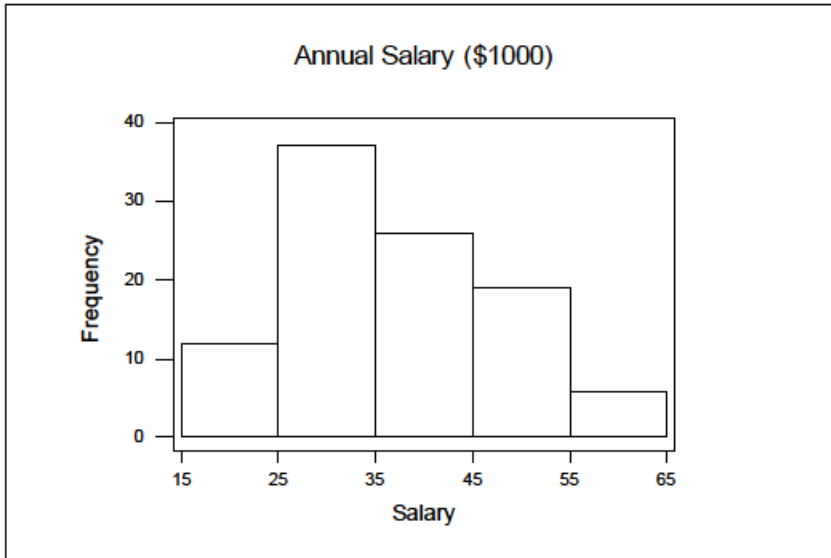
Height	Count	Rel. Freq.
64	2	0.111
65	4	0.222
66	4	0.222
67	2	0.111
68	4	0.222
69	1	0.056
70	1	0.056

b.



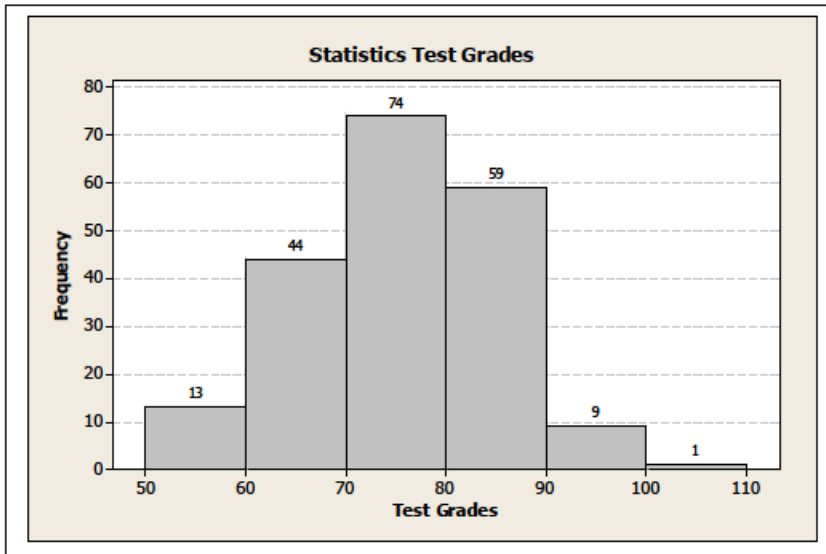
d. $0.222 + 0.111 + 0.222 + 0.056 + 0.056 = 0.667 = 66.7\%$

- 2.8
- a. 35-45
 - b. Values greater than or equal to 35 and also less than 45 belong to the class 35-45.
 - c. Difference between upper and lower class boundaries.
 - i. Subtracting the lower class boundary from the upper class boundary for any one class
 - ii. Subtracting a lower class boundary from the next consecutive lower class boundary
 - iii. Subtracting an upper class boundary from the next consecutive upper class boundary
 - d.

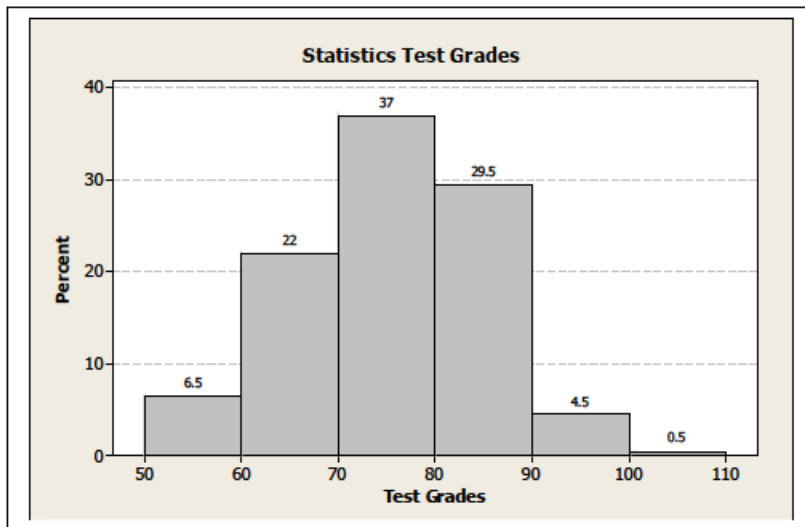


2.9 a. 10

b.



c.



d. Relative frequency histogram: percent who pass, percent who need help, idea how class is doing as a whole, grade most likely to receive, etc.

Refer to frequency distribution information before exercise 2.8 if necessary. Either class boundaries or class midpoints, may be used to determine increments along the horizontal axis for histograms of grouped frequency distributions.

2.10 a. Class limits frequency

12 - 18	1
18 - 24	14
24 - 30	22
30 - 36	8
36 - 42	5
42 - 48	3
48 - 54	2

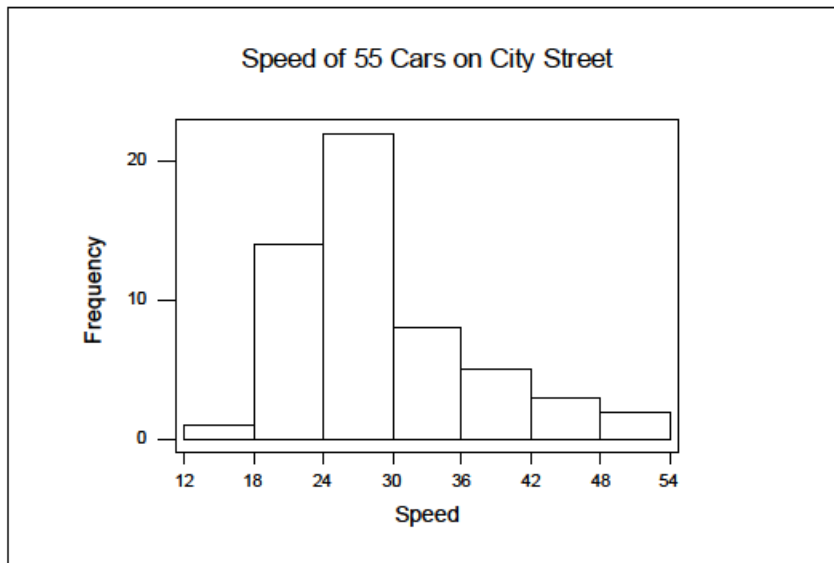
b. class width = 6

c. class midpoint = $(24+30)/2 = \underline{27}$

lower class boundary = 24

upper class boundary = 30

d.



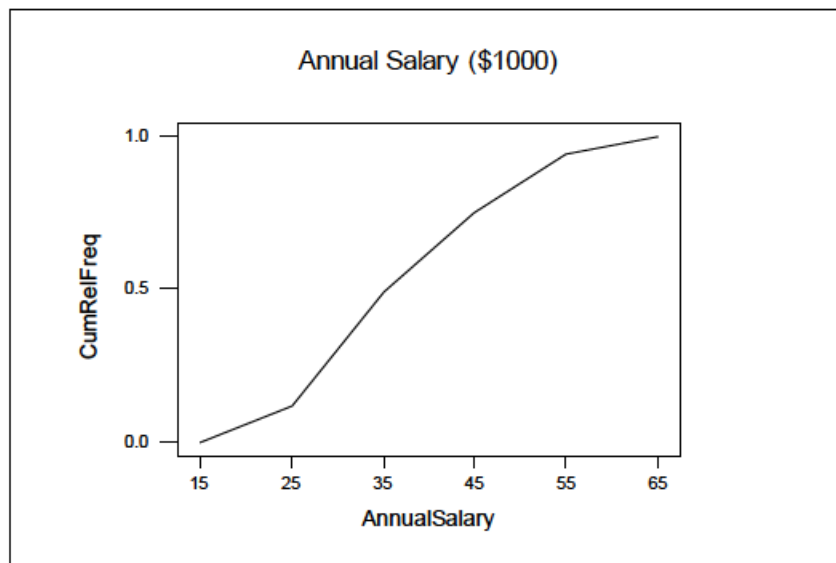
2.11 a.

<u>Class Boundaries</u>	<u>Cumulative Frequency</u>
$15 \leq x < 25$	12
$25 \leq x < 35$	49
$35 \leq x < 45$	75
$45 \leq x < 55$	94
$55 \leq x \leq 65$	100

b.

<u>Class Boundaries</u>	<u>Cum. Rel. Frequency</u>
$15 \leq x < 25$	0.12
$25 \leq x < 35$	0.49
$35 \leq x < 45$	0.75
$45 \leq x < 55$	0.94
$55 \leq x \leq 65$	1.00

c.



- d. \$45,000
 e. \$45,000; They're the same, just asked differently.