Moore SCC 8e

Chapter 11

1. The most common graph of the distribution of a quantitative variable is a:

a. Bar graph

b. Line graph

*c. Histogram

d. Stem and leaf

A. Incorrect. This is a graph of categorical data.
B. Incorrect. This can be a graph of categorical or numerical data.
C. Correct.
D. Incorrect. The graph of the stem and leaf is a histogram.

Text Reference: Section 11.1

2. Use the following class set of grades to answer this question:

95 87 63 88 82 91 99 71 43 55 82 64 75 75 84 93 87 76 55 91

The first step to drawing a histogram for this data set is:

a. Change the units of the variable.

b. Create a frequency chart.

*c. Divide the range of data into classes of equal width.

d. Find the measures of central tendency of the data set.

A. Incorrect. A histogram is based upon the frequency based upon *dividing the data into classes of equal width*.
B. Incorrect. A histogram is based upon the frequency based upon *dividing the data into classes of equal width*.
C. Correct.

D. Incorrect. A histogram is based upon the frequency based upon *dividing the data into classes of equal width*.

Text Reference: Section 11.1: Histograms

3. Use the following class set of grades to answer this question:

95 87 63 88 82 91 99 71 43 55 82 64 75 75 84 93 87 76 55 91

If we used classes of size ten, the count of each class would be:

*a.

Class	Count
40 to 49	1
50 to 59	2
60 to 69	2
70 to 79	4
80 to 89	5
90 to 99	6

b.

Class	Count
40 to 50	1
50 to 60	2
60 to 70	2
70 to 80	4
80 to 90	5
90 to 100	6

c.

Class	Count
40 to 44	1
45 to 49	0
50 to 54	1
55 to 59	2
60 to 64	2
65 to 69	0
70 to 74	1
75 to 79	3
80 to 84	3
85 to 89	2
90 to 94	3
95 to 99	2

d.

Class	Count
40 to 45	1
45 to 50	0
50 to 55	1
55 to 60	2
60 to 65	2
65 to 70	0
70 to 75	1
75 to 80	3

80 to 85 3

85 to 90 2

90 to 95 3

95 to 100 2

A. Correct.
B. Incorrect. The classes must be distinct and exclusive.
C. Incorrect. This is not class of size 10.
D. Incorrect. This is not class of size 10 nor is it distinct/exclusive.

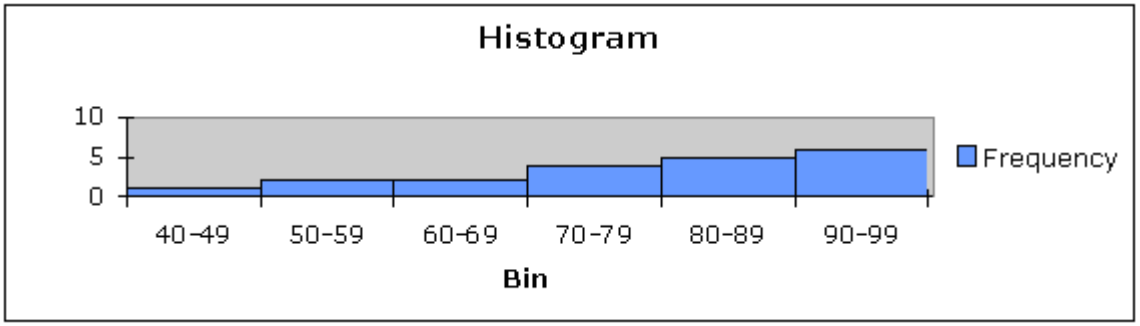
Text Reference: Section 11.1: Histograms

4. Use the following class set of grades to answer this question:

95 87 63 88 82 91 99 71 43 55 82 64 75 75 84 93 87 76 55 91

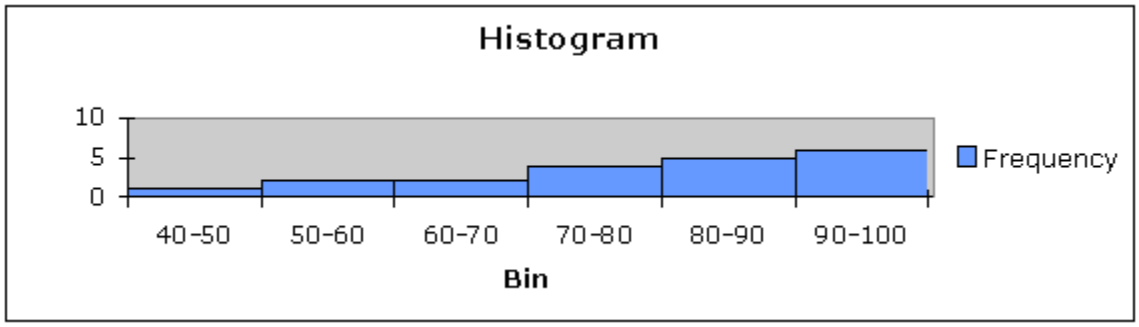
An appropriate histogram for this data set using a class of width 10 would be:

*a.



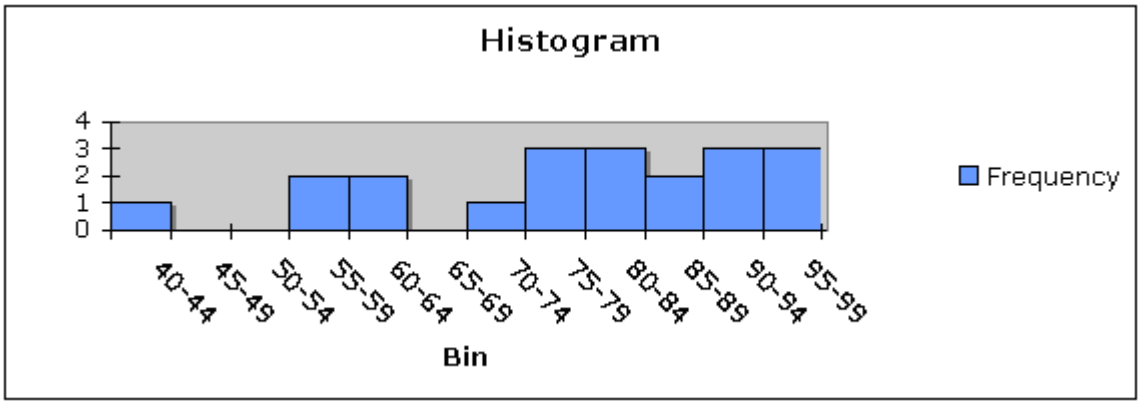
(ch11q04a.jpg)

b.



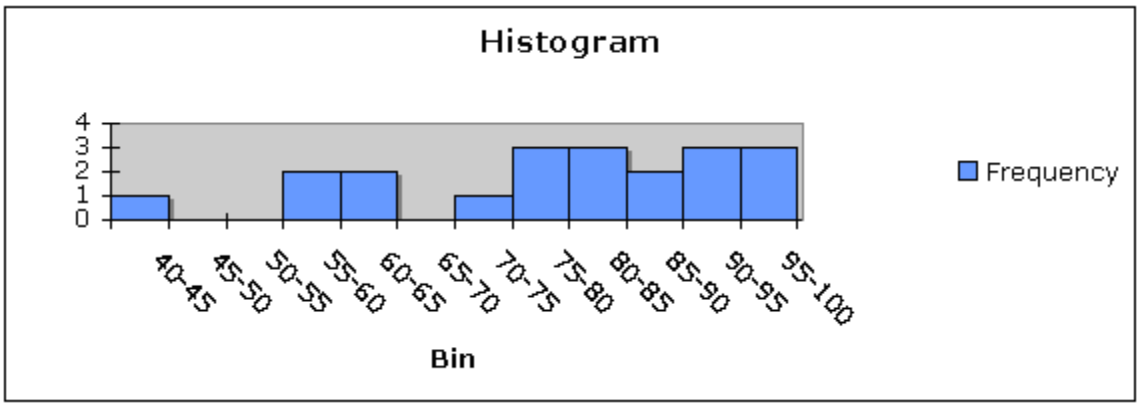
(ch11q04b.jpg)

c.



(ch11q04c.jpg)

d.

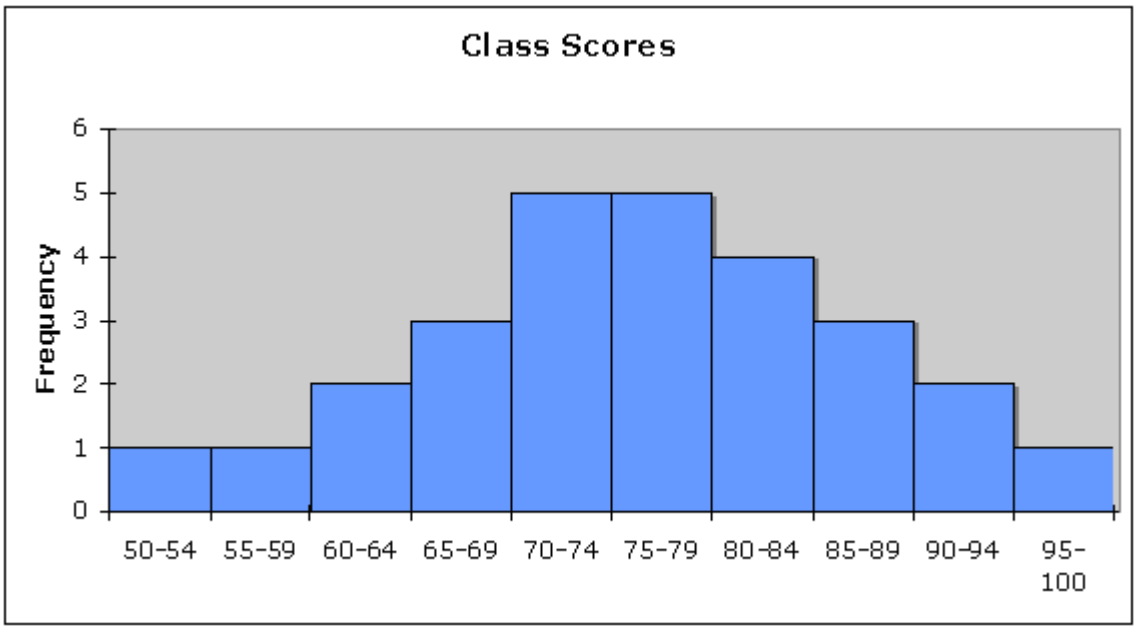


(ch11q04d.jpg)

A. Correct.
B. Incorrect. The classes are not distinct or exclusive.
C. Incorrect. This is not a class size of 10.
D. Incorrect. This is not a class size of 10 nor is it exclusive/distinct.

Text Reference: Section 11.1: Histograms

5. Use the histogram to answer the following question:



(ch11q05-10.jpg)

What is the class width?

a. 4

*b. 5

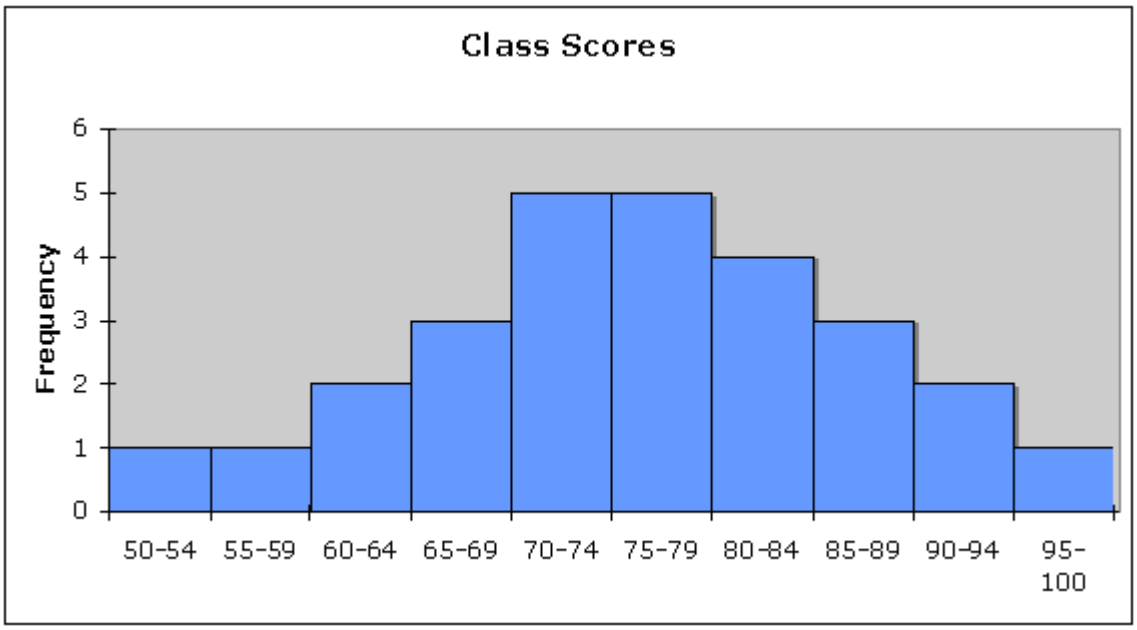
c. 10

d. Cannot be determined from the graph.

A. Incorrect. Class size is 5.
B. Correct.
C. Incorrect. Class size is 5.
D. Incorrect. Class size is 5.

Text Reference: Section 11.1: Histograms

6. Use the histogram to answer the following question:



(ch11q05-10.jpg)

How many people took the test?

a. 25

b. 26

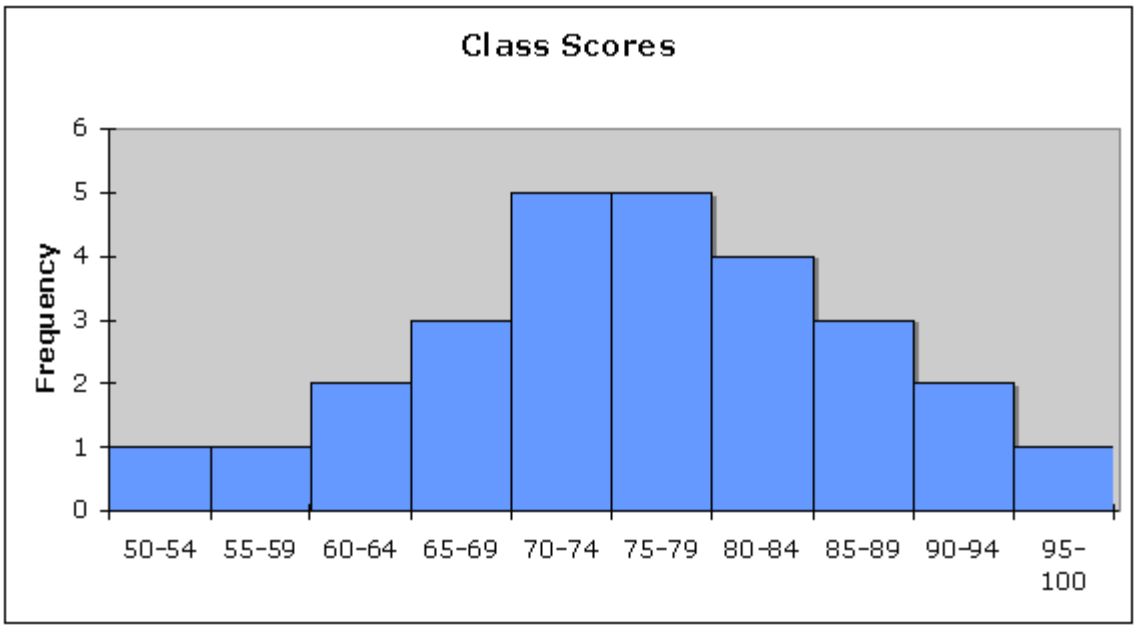
*c. 27

d. 28

A. Incorrect. Add up the frequencies for each class (1+1+2+3+5+5+4+3+2+1) = 27
B. Incorrect. Add up the frequencies for each class (1+1+2+3+5+5+4+3+2+1) = 27
C. Correct.
D. Incorrect. Add up the frequencies for each class (1+1+2+3+5+5+4+3+2+1) = 27

Text Reference: Section 11.1: Histograms

7. Use the histogram to answer the following question:



(ch11q05-10.jpg)

How many people scored a 75 or higher?

a. 10

*b. 15

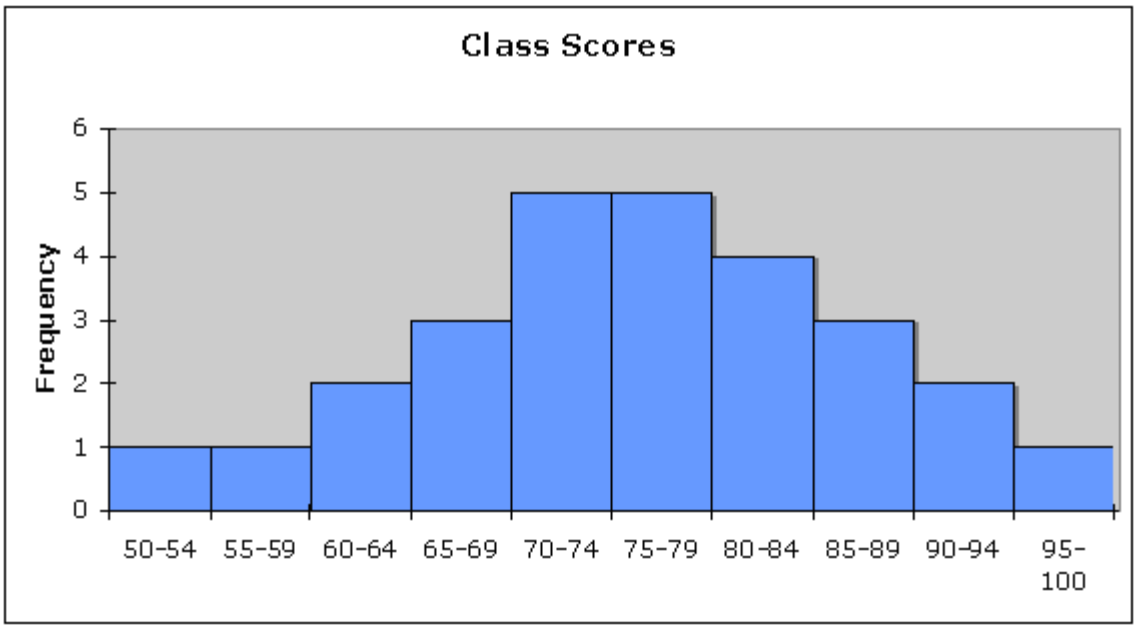
c. 20

d. Cannot be determined from the graph.

A. Incorrect. Add the frequencies from 75 and higher. (5+4+3+2+1) or 15.
B. Correct.
C. Incorrect. Add the frequencies from 75 and higher. (5+4+3+2+1) or 15.
D. Incorrect. Add the frequencies from 75 and higher. (5+4+3+2+1) or 15.

Text Reference: Section 11.1: Histograms

8. Use the histogram to answer the following question:



(ch11q05-10.jpg)

How would you describe the shape of the graph?

a. Skewed to the left

b. Skewed to the right

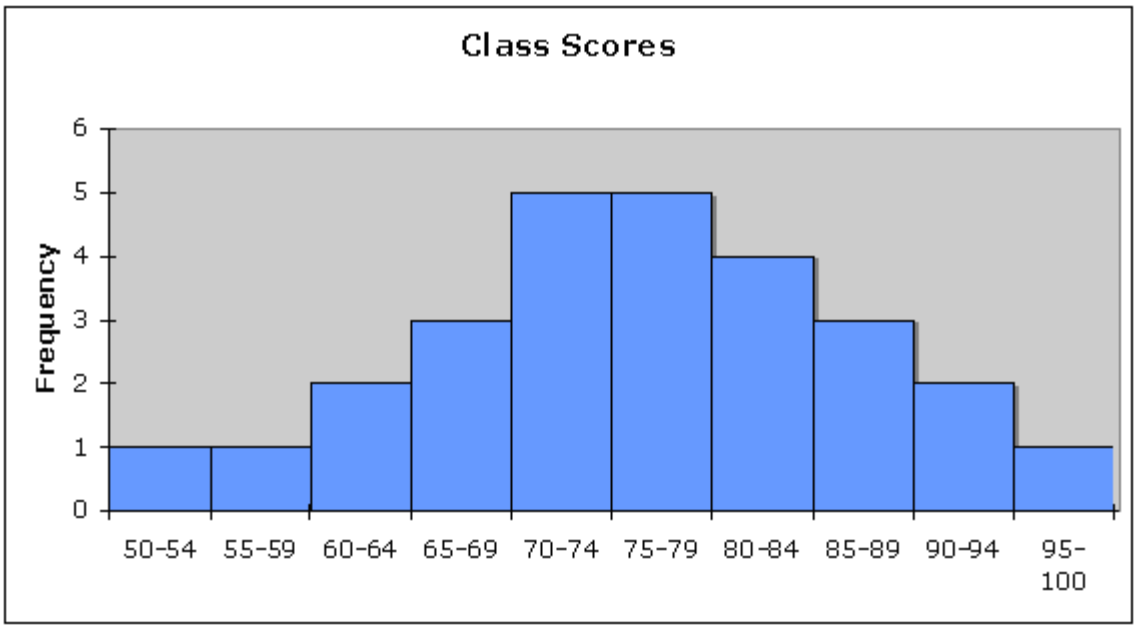
*c. Roughly symmetrical

d. There is no pattern to the data, so we cannot describe the shape of the graph.

A. Incorrect. The majority of data is clustered in the center and appears to be symmetrical.
B. Incorrect. The majority of data is clustered in the center and appears to be symmetrical.
C. Correct. The majority of data is clustered in the center and appears to be symmetrical.
D. Incorrect. The majority of data is clustered in the center and appears to be symmetrical.

Text Reference: Section 11.2: Interpreting histograms

9. Use the histogram to answer the following question:



(ch11q05-10.jpg)

The spread of data is:

*a. Between 50 and 100

b. Between 0 and 100

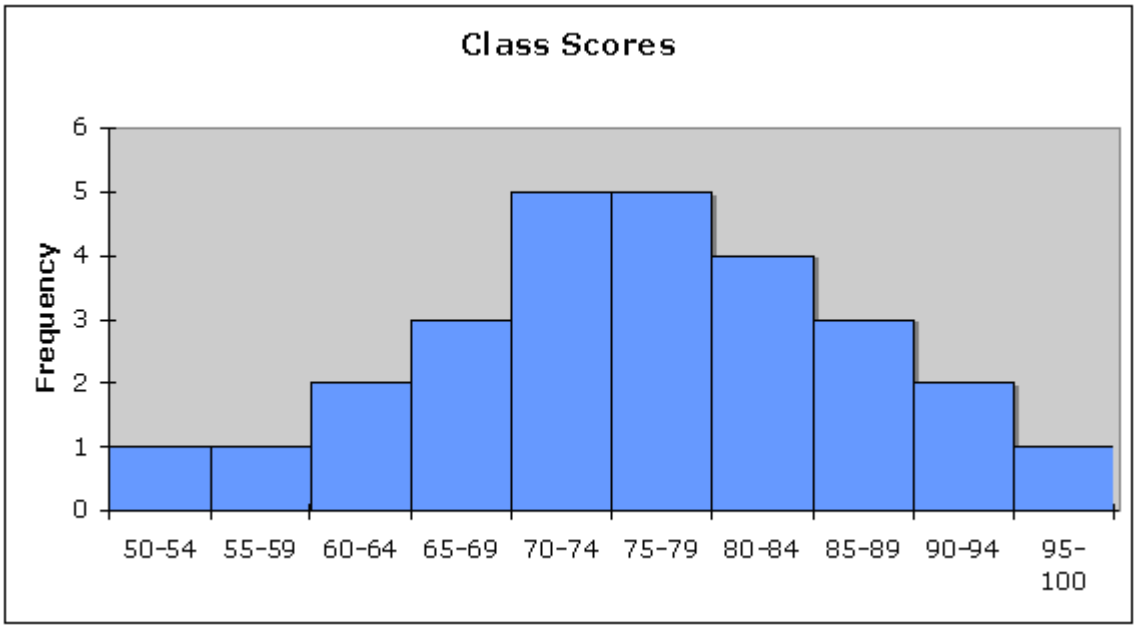
c. Between 60 and 94

d. Cannot be determined from the graph.

A. Correct. The lowest class is 50-54 and the highest class is 95-100.
B. Incorrect. The lowest class is 50-54 and the highest class is 95-100. So between 50 and 100 would be appropriate.
C. Incorrect. The lowest class is 50-54 and the highest class is 95-100. So between 50 and 100 would be appropriate.
D. Incorrect. The lowest class is 50-54 and the highest class is 95-100. So between 50 and 100 would be appropriate.

Text Reference: Section 11.2: Interpreting histograms

10. Use the histogram to answer the following question:



(ch11q05-10.jpg)

A possible stemplot of the data set would be

a.

5| 0 5

6| 0 0 5 8 9

7| 0 1 2 3 4 5 6 7 9 9

8| 0 1 1 3 7 7 9

9| 1 3 8

b.

5| 0 5

6| 0 0 5 8

7| 0 1 2 4 5 6 7 9 9

8| 0 1 1 3 7 7 9

9| 1 3

*c.

5| 0

5| 5

6| 0 0

6| 5 8 9

7| 0 1 2 3 4

7| 5 6 7 9 9

8| 0 1 1 3

8| 7 7 9

9| 1 3

9| 8

d. None of the choices are correct.

A. Incorrect. The graph is by class of size five, and the stem and leaf should reflect this. This class has a size of ten.
B. Incorrect. The graph is by class of size five, and the stem and leaf should reflect this. Also check the frequencies of each class.
C. Correct. The graph is by class of size five, and the stem and leaf should reflect this.
D. Incorrect. The graph is by class of size five, and one of the stem and leaf choices reflects this.

Text Reference: Section 11.3: Stemplots