

## Chapter 2: Organizing Data

### MULTIPLE CHOICE

1. Finish times (to the nearest hour) for 10 dogsled teams are shown below.  
Find the class width. Use five classes. (Round your answer to the nearest integer.)

234      271      339      361      354      263      236      290      315      254

- A) 119  
B) 27  
C) 121  
D) 25  
E) 26

ANS: D                      PTS: 1                      DIF: Medium                      REF: Bra\_US\_9e  
OBJ: Find the class width                      TOP: 2.1                      KEY: 5  
MSC: 2.1.5                      NOT: Application

2. Finish times (to the nearest hour) for 10 dogsled teams are shown below.  
Make a frequency table showing class limits, class boundaries, midpoints, frequency, relative frequencies, and cumulative frequencies. Use three classes. (Round your answer for relative frequency to the nearest hundredth and for midpoint to the nearest tenth.)

236      263      273      283      239      280      270      310      259      310

- A) Class Limits              Boundaries              Midpoint              Freq.              Relative Freq.  
Cumulative Freq.              236 – 260              235.5 – 260.5              248.0              3  
0.30              3  
261 – 284              260.5 – 284.5              272.5              5              0.50  
8  
285 – 308              284.5 – 308.5              296.5              2              0.20  
10
- B) Class Limits              Boundaries              Midpoint              Freq.              Relative Freq.  
Cumulative Freq.              236 – 260              235.5 – 260.5              248.0              3  
0.30              3  
261 – 285              260.5 – 285.5              273.0              5              0.50  
8  
286 – 310              285.5 – 310.5              298.0              2              0.20  
10
- C) Class Limits              Boundaries              Midpoint              Freq.              Relative Freq.  
Cumulative Freq.              236 – 260              235.5 – 260.5              248.0              4  
0.30              3  
261 – 284              260.5 – 285.5              273.0              7              0.50  
8  
285 – 310              285.5 – 310.5              296.5              3              0.20  
10
- D) Class Limits              Boundaries              Midpoint              Freq.              Relative Freq.  
Cumulative Freq.              236 – 260              235.5 – 260.5              248.0              4  
0.30              3

261 – 284	260.5 – 284.5	272.5	7	0.50
8				
285 – 308	284.5 – 308.5	296.5	3	0.20
10				

E) none of these choices

ANS: B

PTS: 1

DIF: Medium

REF: Bra\_US\_9e

OBJ: Create a frequency table

TOP: 2.1

KEY: 11-16

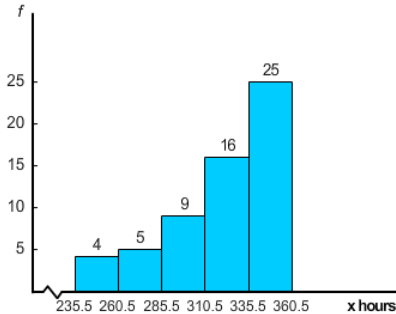
MSC: 2.1.11b

NOT: Application

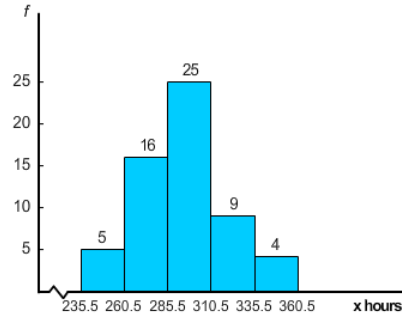
3. Finish times (to the nearest hour) for 59 dogsled teams are shown below. Draw a histogram. Use five classes.

261	269	236	244	280	296	284	299	288	288	249	256
338	360	341	333	261	266	287	296	313	311	306	306
299	303	277	283	304	305	288	290	288	289	297	299
332	330	309	327	306	327	285	291	295	298	306	315
310	318	318	320	333	321	323	324	327	239	358	

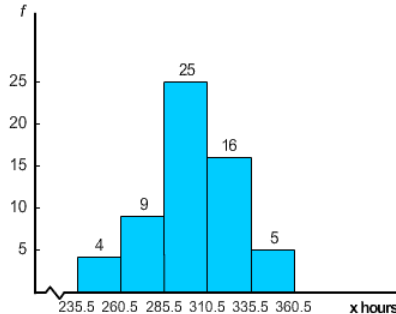
A)



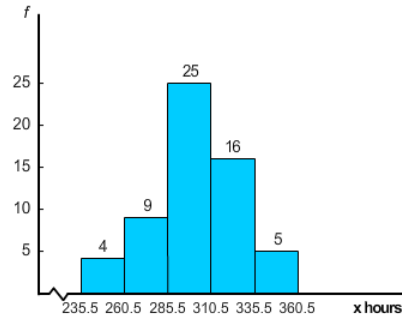
D)



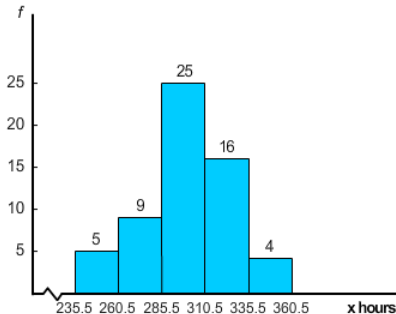
B)



E)



C)



ANS: C

PTS: 1

DIF: Medium

REF: Bra\_US\_9e

OBJ: Draw a histogram

TOP: 2.1

KEY: 10

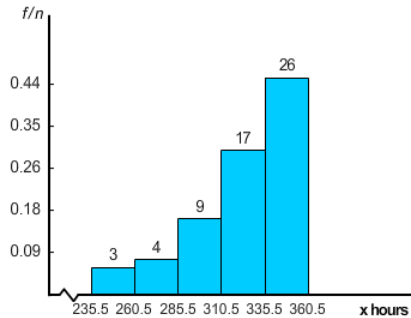
MSC: 2.1.10a

NOT: Application

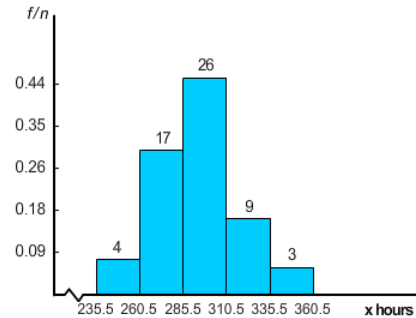
4. Finish times (to the nearest hour) for 59 dogsled teams are shown below. Draw a relative – frequency histogram. Use five classes.

261	270	236	244	278	296	284	297	290	290	250	256
338	360	341	333	261	268	287	296	313	311	309	309
299	303	277	283	304	305	289	290	289	290	297	299
332	330	309	327	309	327	285	291	295	298	306	315
310	318	318	320	333	321	323	324	327	302	319	

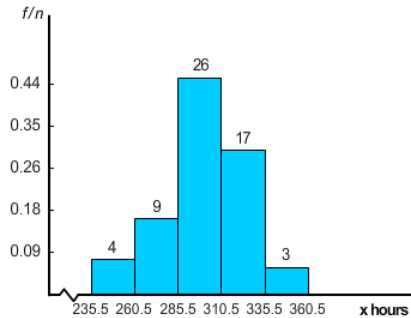
A)



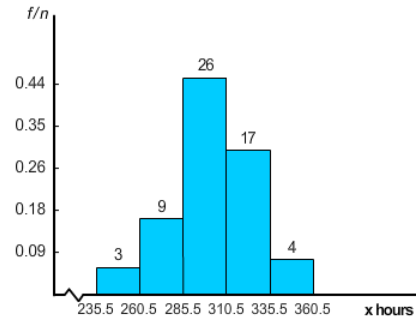
D)



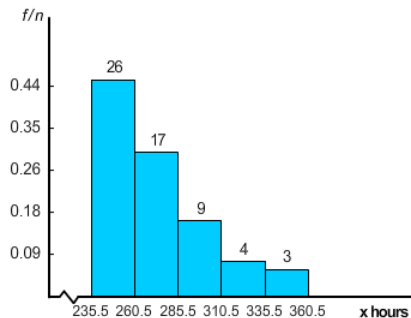
B)



E)



C)



ANS: B

PTS: 1

DIF: Medium

REF: Bra\_US\_9e

OBJ: Draw a histogram

TOP: 2.1

KEY: 11-16

MSC: 2.1.11d

NOT: Application

5. Finish times (to the nearest hour) for 57 dogsled teams are shown below. Use five classes. Categorize the basic distribution shape as uniform or rectangular, mound-shaped symmetric, bimodal, skewed left, or skewed right.

261	271	236	244	279	296	284	299	288	288	247	256
338	360	341	333	261	266	287	296	313	311	307	307
299	303	277	283	304	305	288	290	288	289	297	299
332	330	309	328	307	328	285	291	295	298	306	315
310	318	318	320	333	321	323	324	327			

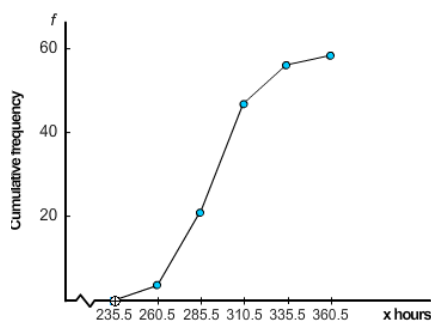
- A) approximately uniform or rectangular  
 B) approximately mound-shaped symmetric  
 C) approximately skewed left  
 D) approximately skewed right  
 E) approximately bimodal

ANS: B                      PTS: 1                      DIF: Medium                      REF: Bra\_US\_9e  
 OBJ: Categorize the basic distribution shape                      TOP: 2.1  
 KEY: 11-16                      MSC: 2.1.11e                      NOT: Application

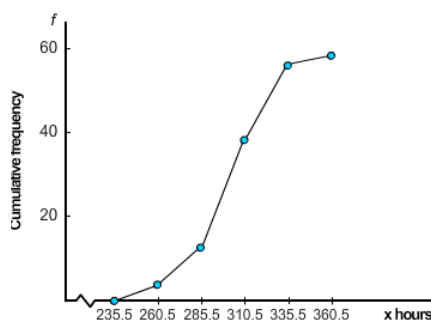
6. Finish times (to the nearest hour) for 59 dogsled teams are shown below. Draw a ogive. Use five classes.

261	274	236	244	280	296	284	296	290	290	250	256
338	360	341	333	261	269	287	296	313	311	309	309
299	303	277	283	304	305	289	290	289	290	297	299
332	330	309	327	309	327	285	291	295	298	306	315
310	318	318	320	333	321	323	324	327	302	319	

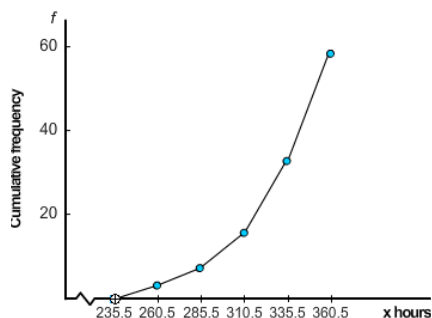
A)



D)

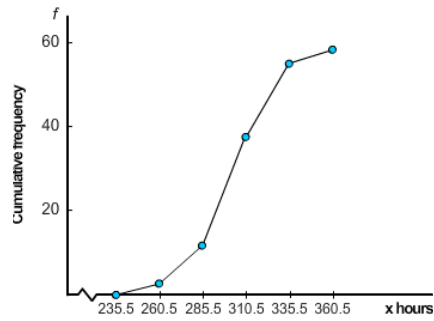


B)



E) none of these choices

C)



ANS: D

PTS: 1

DIF: Medium

REF: Bra\_US\_9e

OBJ: Draw a ogive

TOP: 2.1

KEY: 11-16

MSC: 2.1.11f

NOT: Application

7. Finish times (to the nearest hour) for 10 dogsled teams are shown below. Make a frequency table showing class limits, class boundaries, midpoints, frequency, relative frequencies, and cumulative frequencies. Use three classes. The class size of the given data is 24. (Round your answer for relative frequency to the nearest hundredth and for midpoint to the nearest tenth.)

310    271    278    295    283    236    281    266    269    289

A)	Class Limits	Boundaries	Midpoint	Freq.	Relative Freq.	
	Cumulative Freq.	236 – 260	235.5 – 260.5	248.0	1	
	0.10	1				
	261 – 284	260.5 – 284.5	272.5	6	0.60	
	7					
	285 – 308	284.5 – 308.5	296.5	3	0.30	
	10					
B)	Class Limits	Boundaries	Midpoint	Freq.	Relative Freq.	
	Cumulative Freq.	236 – 260	235.5 – 260.5	248.0	1	
	0.10	1				
	261 – 285	260.5 – 285.5	273.0	6	0.60	
	7					
	286 – 310	285.5 – 310.5	298.0	3	0.30	
	10					
C)	Class Limits	Boundaries	Midpoint	Freq.	Relative Freq.	
	Cumulative Freq.	236 – 260	235.5 – 260.5	248.0	2	
	0.10	1				
	261 – 284	260.5 – 285.5	273.0	8	0.60	
	7					
	285 – 310	285.5 – 310.5	296.5	4	0.30	
	10					
D)	Class Limits	Boundaries	Midpoint	Freq.	Relative Freq.	
	Cumulative Freq.	236 – 260	235.5 – 260.5	248.0	2	
	0.10	1				
	261 – 284	260.5 – 284.5	272.5	8	0.60	
	7					
	285 – 308	284.5 – 308.5	296.5	4	0.30	

E) none of these choices

ANS: B

PTS: 1

DIF: Medium

REF: Bra\_US\_9e

OBJ: Create a frequency table

TOP: 2.1

KEY: 11-16

MSC: 2.1.11b

NOT: Application

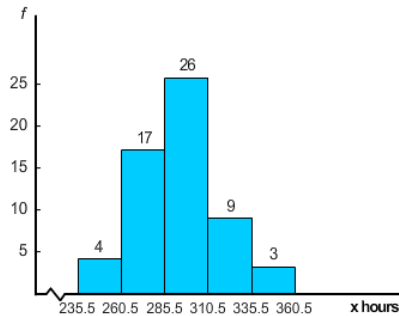
8. Finish times (to the nearest hour) for 59 dogsled teams are shown below. Draw a histogram. Use five classes.

261 275 236 244 278 296 284 298 289 289 250 256  
 338 360 341 333 261 268 287 296 313 311 309 309  
 299 303 277 283 304 305 286 290 286 287 297 299  
 332 330 309 326 309 326 285 291 295 298 306 315  
 310 318 318 320 333 321 323 324 327 302 319

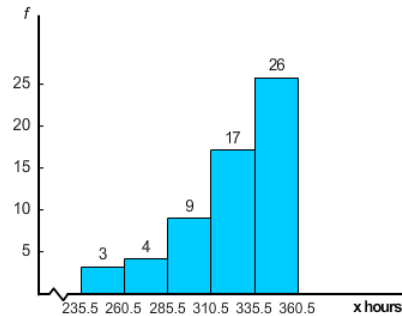
The frequency table for the above data is given below.

Class Limits	Boundaries	Midpoint	Freq.	Relative Freq.	Cumulative Freq.
236 – 260	235.5 – 260.5	248	4	0.07	4
261 – 285	260.5 – 285.5	273	9	0.15	13
286 – 310	285.5 – 310.5	298	26	0.44	39
311 – 335	310.5 – 335.5	323	17	0.29	56
336 – 360	335.5 – 360.5	348	3	0.05	59

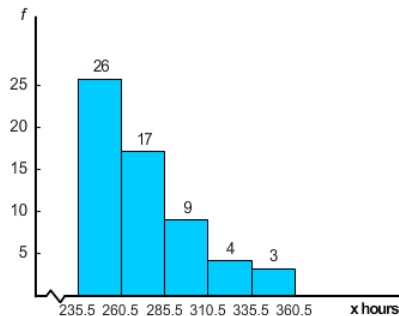
A)



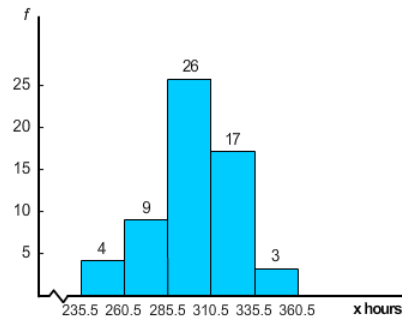
D)

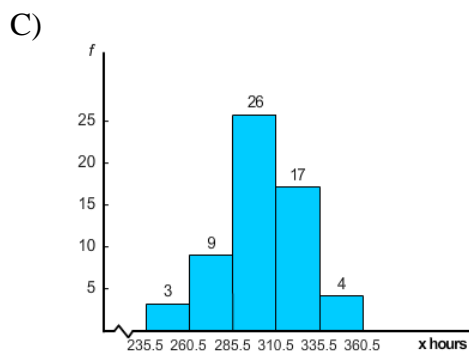


B)



E)





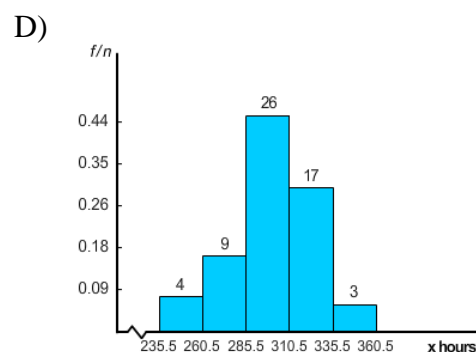
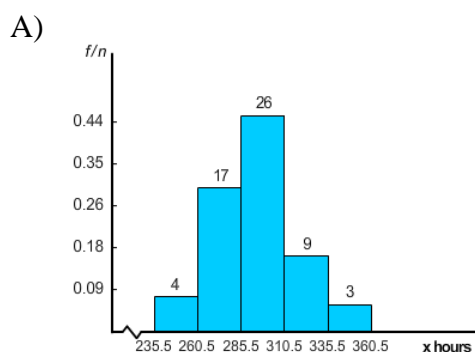
ANS: E                      PTS: 1                      DIF: Easy                      REF: Bra\_US\_9e  
 OBJ: Draw a histogram                      TOP: 2.1                      KEY: 11-16  
 MSC: 2.1.11c                      NOT: Application

9. Finish times (to the nearest hour) for 59 dogsled teams are shown below. Draw a relative – frequency histogram. Use five classes.

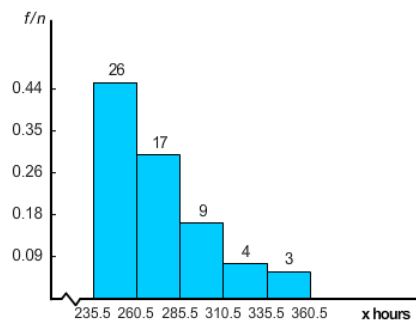
261 271 236 244 280 296 284 297 289 289 248 256  
 338 360 341 333 261 267 287 296 313 311 308 308  
 299 303 277 283 304 305 286 290 286 287 297 299  
 332 330 309 328 308 328 285 291 295 298 306 315  
 310 318 318 320 333 321 323 324 327 302 319

The frequency table for the above data is given below.

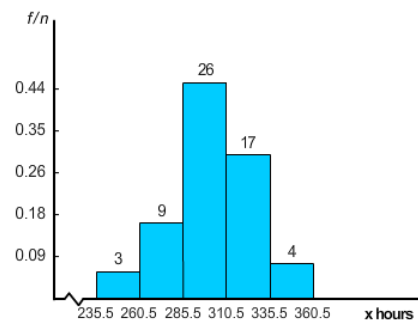
Class Limits	Boundaries	Midpoint	Freq.	Relative Freq.	Cumulative Freq.
236 – 260	235.5 – 260.5	248	4	0.07	4
261 – 285	260.5 – 285.5	273	9	0.15	13
286 – 310	285.5 – 310.5	298	26	0.44	39
311 – 335	310.5 – 335.5	323	17	0.29	56
336 – 360	335.5 – 360.5	348	3	0.05	59



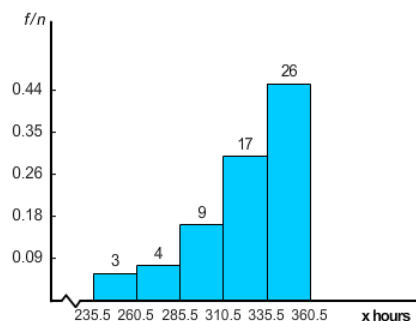
B)



E)



C)



ANS: D

PTS: 1

DIF: Easy

REF: Bra\_US\_9e

OBJ: Draw a histogram

TOP: 2.1

KEY: 11-16

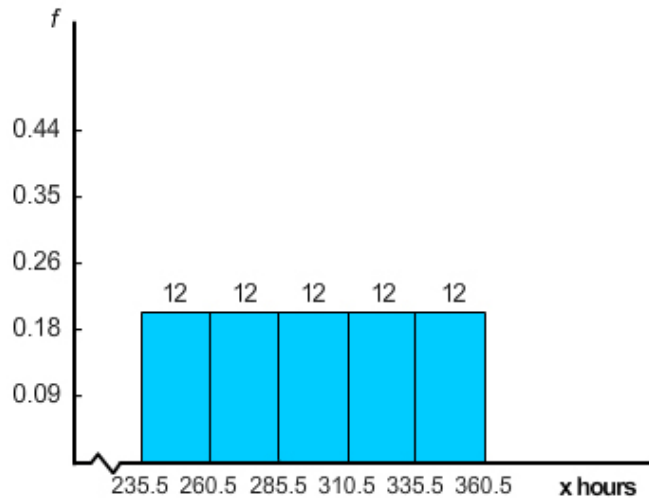
MSC: 2.1.11c NOT: Application

10. Finish times (to the nearest hour) for 60 dogsled teams are shown below. Use five classes. Categorize the basic distribution shape as uniform, mound-shaped symmetric, bimodal, skewed left, or skewed right.

261	271	236	244	279	296	284	299	288	288	247	256
338	360	341	333	261	266	287	296	313	311	307	307
279	283	277	283	285	275	259	239	288	289	297	299
341	358	257	328	244	328	245	258	259	259	319	315
339	359	347	348	333	321	323	324	327	349	351	355

The relative frequency histogram of the above data is given below.





- A) mound-shaped symmetric
- B) none of these choices
- C) Bimodal
- D) Uniform or rectangular
- E) Skewed right

ANS: D                      PTS: 1                      DIF: Easy                      REF: Bra\_US\_9e  
 OBJ: Categorize the basic distribution shape                      TOP: 2.1  
 KEY: 11-16                      MSC: 2.1.12e                      NOT: Application

11. Assume that the following data represent baseball batting averages (multiplied by 1000) for a random sample of National League players near the end of the baseball season. Make a frequency table showing class limits, class boundaries, midpoints and frequency. Use five classes. (Round your answer for boundaries and midpoints to the nearest tenth.)

193	257	150	294	147	297	199	250	183
125	107	259	310	310	273	290	317	252
215	250	246	259	265	184	115	200	

- |                 |               |          |           |
|-----------------|---------------|----------|-----------|
| A) Class Limits | Boundaries    | Midpoint | Frequency |
| 107 – 149       | 106.5 – 149.5 | 128.0    | 4         |
| 150 – 194       | 149.5 – 194.5 | 172.0    | 3         |
| 195 – 236       | 194.5 – 236.5 | 215.5    | 4         |
| 237 – 278       | 236.5 – 278.5 | 257.5    | 10        |
| 279 – 321       | 278.5 – 321.5 | 300.0    | 5         |
| B) Class Limits | Boundaries    | Midpoint | Frequency |
| 107 – 149       | 106.5 – 149.5 | 128.0    | 5         |
| 150 – 192       | 149.5 – 192.5 | 171.0    | 2         |
| 193 – 235       | 192.5 – 235.5 | 214.0    | 4         |
| 236 – 278       | 235.5 – 278.5 | 257.0    | 12        |
| 279 – 321       | 278.5 – 321.5 | 300.0    | 3         |
| C) Class Limits | Boundaries    | Midpoint | Frequency |
| 107 – 149       | 106.5 – 149.5 | 128.0    | 5         |
| 150 – 194       | 149.5 – 194.5 | 172.0    | 2         |
| 195 – 236       | 194.5 – 236.5 | 215.5    | 4         |

	237 – 278	236.5 – 278.5	257.5	12
	279 – 321	278.5 – 321.5	300.0	3
D)	Class Limits	Boundaries	Midpoint	Frequency
	107 – 149	106.5 – 149.5	128.0	4
	150 – 192	149.5 – 192.5	171.0	3
	193 – 235	192.5 – 235.5	214.0	4
	236 – 278	235.5 – 278.5	257.0	10
	279 – 321	278.5 – 321.5	300.0	5

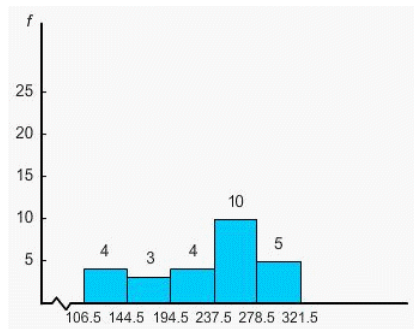
E) none of these choices

ANS: D                      PTS: 1                      DIF: Medium                      REF: Bra\_US\_9e  
 OBJ: Create a frequency table                      TOP: 2.1                      KEY: 11-16  
 MSC: 2.1.13b                      NOT: Application

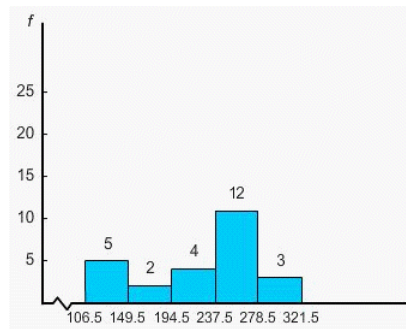
12. Assume that the following data represent baseball batting averages (multiplied by 1000) for a random sample of National League players near the end of the baseball season. The frequency table showing class limits, class boundaries, midpoints and frequency is given below. Draw a histogram.

Class Limits	Boundaries	Midpoint	Frequency
107 – 149	106.5 – 149.5	128.0	4
150 – 192	149.5 – 192.5	171.0	3
193 – 235	192.5 – 235.5	214.0	4
236 – 278	235.5 – 278.5	257.0	10
279 – 321	278.5 – 321.5	300.0	5

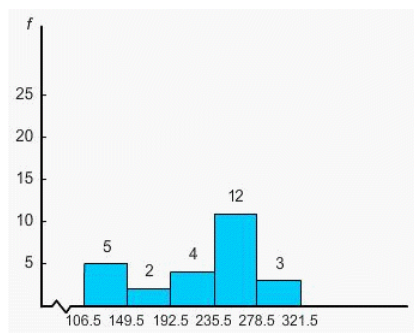
A)



D)

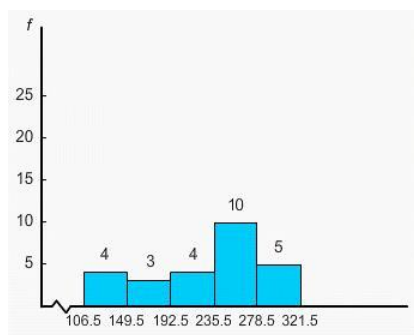


B)



E) none of these choices

C)



ANS: C                      PTS: 1                      DIF: Medium                      REF: Bra\_US\_9e  
 OBJ: Create a frequency table                      TOP: 2.1                      KEY: 11-16  
 MSC: 2.1.14b                      NOT: Application

13. Assume that the following data represent baseball batting averages for a random sample of National League players near the end of the baseball season. Multiply each data value by 1000 to "clear" the decimals.

0.195	0.257	0.152	0.294	0.158	0.298	0.260	0.251	0.181
0.123	0.106	0.259	0.307	0.307	0.279	0.290	0.316	0.253
0.213	0.251	0.247	0.259	0.265	0.182	0.114	0.203	

- A) 195      2570      152      294      158      298      260      251      181  
      123      106      259      307      307      2790      2900      316      253  
      213      251      247      259      265      1820      114      203
- B) 195      257      152      294      158      298      260      251      181  
      123      106      259      307      307      279      290      316      253  
      213      251      247      259      265      182      114      203
- C) 195      2570      1520      294      158      298      260      2510      181  
      123      106      259      307      307      2790      2900      316      253  
      213      251      247      259      2650      1820      114      203
- D) 195      152      257      294      158      298      260      181  
      251      123      106      259      307      307      290      279      316  
      253  
      213      251      247      259      265      182      114      203
- E) 195      2570      257      294      158      298      260      2510      181  
      123      106      259      307      307      279      290      316      253  
      213      251      247      259      265      114      182      203

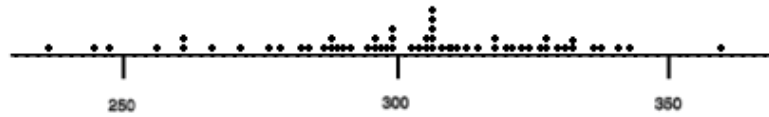
ANS: B                      PTS: 1                      DIF: Easy                      REF: Bra\_US\_9e  
 OBJ: Clear the decimals                      TOP: 2.1                      KEY: 17  
 MSC: 2.1.17a                      NOT: Application

14. Finish times (to the nearest hour) for 57 dogsled teams are shown below. Make a dotplot for the data.

261	271	236	244	279	296	284	299	288	288	247	256
308	360	341	333	261	266	287	296	313	311	307	307
299	303	277	283	304	305	288	290	288	289	297	299

332 330 309 328 307 328 285 291 295 298 306 315  
 310 318 318 318 333 321 323 324 327

A)



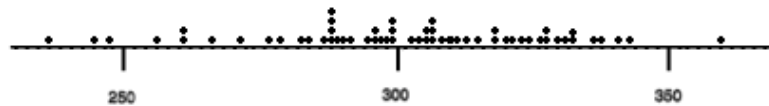
B)



C)



D)



E) none of these choices

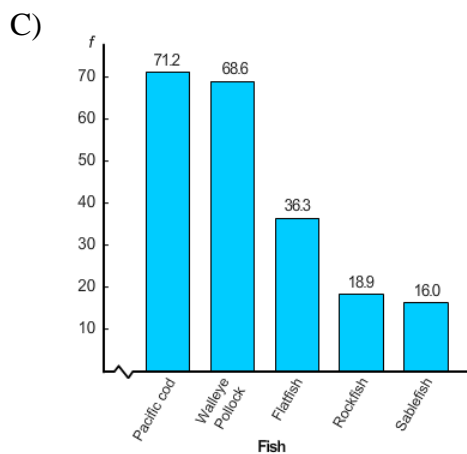
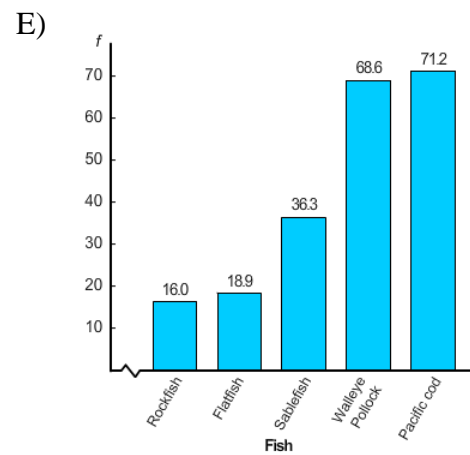
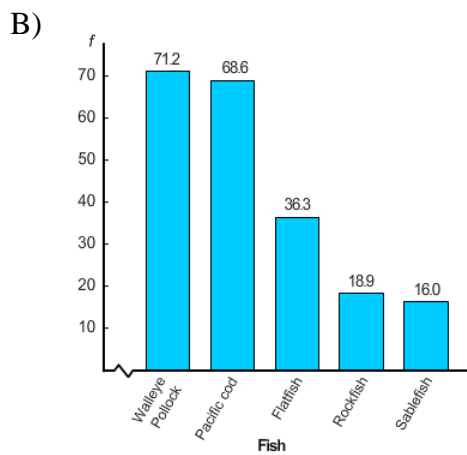
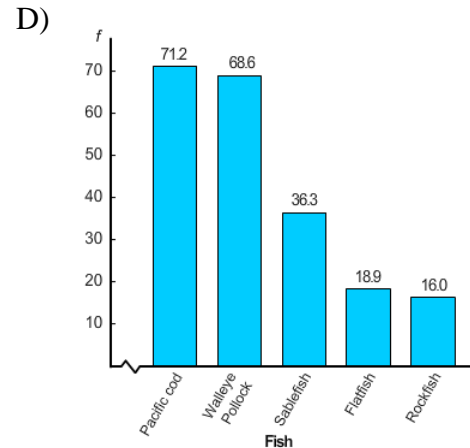
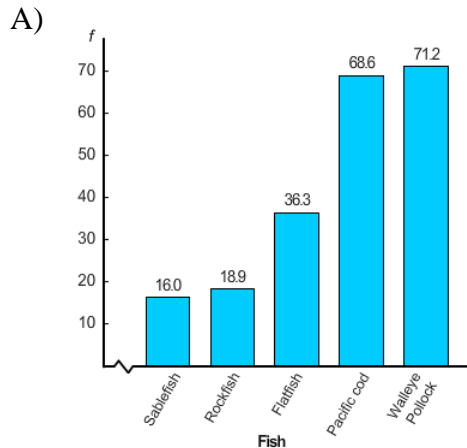
ANS: D PTS: 1 DIF: Medium REF: Bra\_US\_9e  
 OBJ: Create a dotplot TOP: 2.1 KEY: 20  
 MSC: 2.1.20 NOT: Application

15. At Westgate Community College, a survey was done to determine when students are available for class. A questionnaire was given to a random sample of students. The instructions were to mark each of the time categories in which they could take classes. Many students marked more than one category. Responses from the students in the sample indicated that 52 would take early morning classes, 85 would take mid-morning classes, 41 would take afternoon classes and 37 would take evening classes. Would a circle graph be appropriate for this data? Give a reason for your answer.

- A) No. Since there were multiple responses from some students this data does not represent parts of a whole.  
 B) No. There are too few categories for a circle graph to be useful.  
 C) Yes. Circle graphs are most effective when the number of wedges is 10 or fewer.  
 D) Yes. Each category represents a percentage of the total student population that could attend class at a certain time.  
 E) Yes. The categories represent all possible responses.

ANS: A PTS: 1 DIF: Easy REF: Bra\_USB\_4e  
 OBJ: Judge an appropriate data display TOP: 2.2 KEY: 12  
 MSC: 2.2.12 NOT: Application

16. It's not an easy life, but it's a good life! Suppose you decide to take the summer off and sign on as a deck hand for a commercial fishing boat in Alaska that specializes in deep-water fishing for groundfish. What kind of fish can you expect to catch? One way to answer this question is to examine the reports on groundfish caught in the Gulf of Alaska. The following list indicates the types of fish caught annually in thousands of metric tons: flatfish, 36.3; Pacific cod, 68.6; sablefish, 16.0; Walleye Pollock, 71.2; rockfish, 18.9. Make a Pareto chart showing the annual harvest for commercial fishing in the Gulf of Alaska.



ANS: B

PTS: 1

DIF: Easy

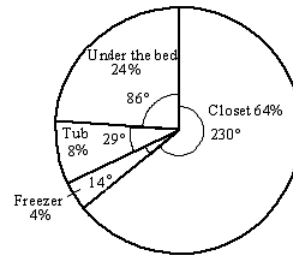
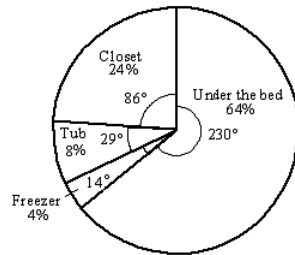
REF: Bra\_US\_9e

OBJ: Create a Pareto chart  
MSC: 2.2.11a NOT: Application

TOP: 2.2

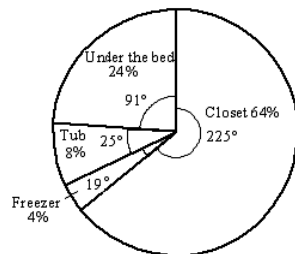
KEY: 11

17. A survey of 1000 adults uncovered some interesting housekeeping secrets. When unexpected company comes, where do we hide the mess? The survey showed that 64% of the adults toss their mess in the closet, 24% shove things under bed, 8% put things in the bathtub, and 4% put the mess in the freezer. Make a circle graph to display this information.
- A) D)

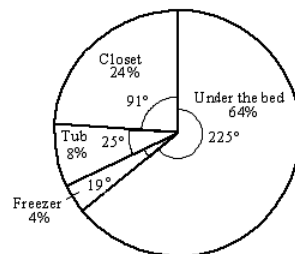


B)

E) none of these choices



C)



ANS: D PTS: 1  
OBJ: Create a circle graph

DIF: Easy  
TOP: 2.2

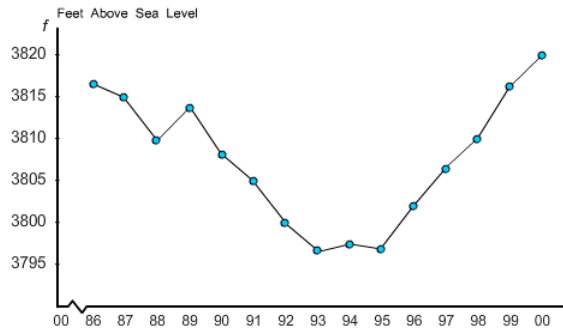
REF: Bra\_US\_9e  
KEY: 9

18. Pyramid Lake, Nevada, is described as the pride of the Paiute Indian Nation. It is a beautiful desert lake famous for very large trout. The elevation of the lake surface (feet above sea level) varies according to the annual flow of the Truckee River from Lake Tahoe. Assume that the U.S. Geological Survey provided the following data:

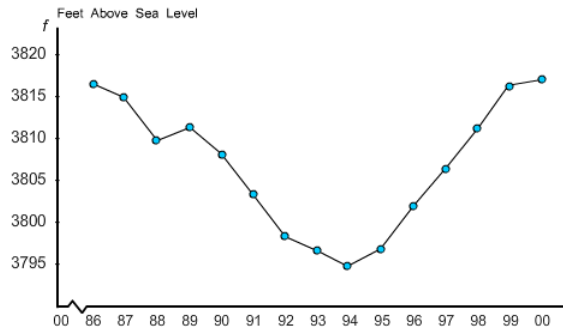
Year	1986	1987	1988	1989	1990	1991	1992	1993
Elevation	3817	3815	3810	3812	3808	3803	3798	3797
Year	1994	1995	1996	1997	1998	1999	2000	
Elevation	3795	3797	3802	3807	3811	3816	3817	

Make a time series graph.

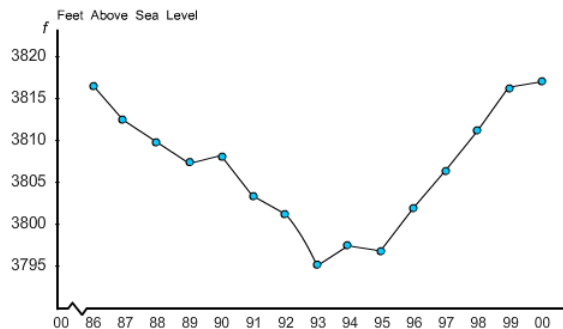
A)



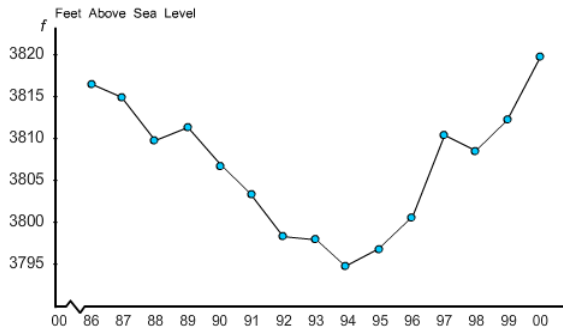
B)



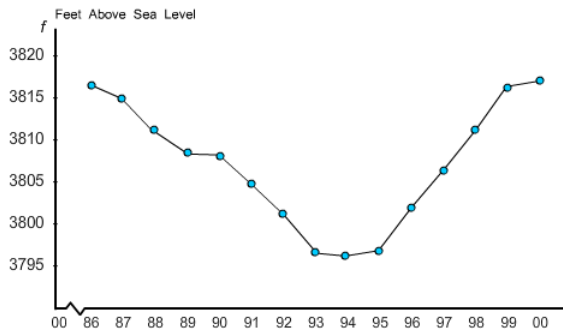
C)



D)



E)



ANS: B

PTS: 1

DIF: Easy

REF: Bra\_US\_9e

OBJ: Create a time series graph

TOP: 2.2

KEY: 13

MSC: 2.2.13

NOT: Application

19. How long did real cowboys live? One answer may be found in the book *The Last Cowboys* by Connie Brooks (University of New Mexico Press). This delightful book presents a thoughtful sociological study of cowboys in West Texas and Southeastern New Mexico around the year 1890. Assume that a sample of 32 cowboys gave the following years of longevity:

58	52	67	86	72	66	99	88	85	91	91
92	68	68	87	86	73	61	70	75	72	73
85	84	91	57	77	76	84	93	58	49	

Make a stem-and-leaf display for these data.

A) 4 9 = 49 years

```

4      9
5      8 8 7 2
6      8 8 7 6 1
7      7 6 5 3 3 2 2 0
8      8 7 6 6 5 5 4 4
9      9 8 3 2 1 1 1

```

B) 4 9 = 49 years

```

4      9
5      2 7 8 8
6      1 6 7 8
7      0 2 2 3 3 5 7 8
8      3 4 5 5 6 6 7 8
9      1 1 1 2 3 8 9

```



C) 4      9 = 49 years  
      4      9  
      5      8 8 7 2  
      6      8 7 6 1  
      7      8 6 5 4 3 2 2 0  
      8      8 7 6 6 5 5 4 3  
      9      9 8 3 2 1 1 1

D) 4      9 = 49 years  
      4      9  
      5      2 7 8 8  
      6      1 6 7 8 8  
      7      0 2 2 3 3 5 6 7  
      8      4 4 5 5 6 6 7 8  
      9      1 1 1 2 3 9

E) none of these choices

ANS: D                      PTS: 1                      DIF: Easy                      REF: Bra\_US\_9e  
 OBJ: Make a stem-and-leaf display                      TOP: 2.3                      KEY: 2  
 MSC: 2.3.2a                      NOT: Application

20. Wetlands offer a diversity of benefits. They provide habitat for wildlife, spawning grounds for U.S. commercial fish, and renewable timber resources. In the last 200 years the United States has lost more than half its wetlands. Suppose *Environmental Almanac* gives the percentage of wet lands lost in each state in the last 200 years. Assume that for the lower 48 states, the percentage loss of wetlands per state is as follows:

46	37	36	42	81	20	73	59	35	50
87	52	24	27	38	56	39	74	56	31
27	91	46	9	54	52	30	33	28	35
35	23	90	72	85	42	59	50	49	
48	38	60	46	87	50	89	49	67	

The distribution is approximately mound shaped.

- A) False  
 B) True

ANS: B                      PTS: 1                      DIF: Easy                      REF: Bra\_US\_9e  
 OBJ: Clarify whether the statement is true or false                      TOP: 2.3  
 KEY: 2                      MSC: 2.3.2b                      NOT: Application

21. Suppose the American Medical Association Center for Health Policy Research included data, by state, on the number of community hospitals and the average patient stay (in days) in its publication. The data (by state) are shown in the table.  
 Which two states have an unusually high number of hospitals?

State	Hospitals	State	Hospitals	State	Hospitals
Alabama	330	Colorado	79	Georgia	162
Alaska	16	Connecticut	35	Hawaii	19
Arizona	61	Delaware	8	Idaho	41
Arkansas	88	Dist. of Columbia	11	Illinois	279

California	236	Florida	289	Indiana	113
Iowa	123	Nebraska	90	Rhode Island	12
Kansas	133	Nebraska	21	S.Carolina	68
Kentucky	101	New Hampshire	28	S.Dakota	52
Louisiana	459	New Jersey	96	Tennessee	122
Maine	38	New Mexico	37	Texas	235
Maryland	51	New York	333	Utah	42
Mass.	101	N.Caroline	117	Vermont	15
Michigan	175	N.Dakota	47	Virginia	98
Minnesota	276	Ohio	193	Washington	92
Mississippi	102	Oklahoma	399	W.Virginia	59
Missouri	133	Oregon	66	Wisconsin	478
Montana	53	Pennsylvania	231	Wyoming	27

- A) Florida and Wisconsin
- B) Alabama and Arkansas
- C) Wisconsin and Louisiana
- D) Maine and Iowa
- E) none of these choices

ANS: C                      PTS: 1                      DIF: Easy                      REF: Bra\_US\_9e  
 OBJ: Note which states have an unusually high number of hospitals  
 TOP: 2.3                      KEY: 4                      MSC: 2.3.4                      NOT: Application

22. Assume that the U.S Open Golf Tournament was played at Congressional Country club, with prizes ranging from \$465,000 for first place to \$5000. Par for the course is 70. The tournament consists of four rounds played on different days. Suppose the scores for each round of the 32 players who placed in the money (more than \$17,000) were given on a web site. The scores for the first round were as follows:

72	65	68	73	74	73	71	71	74	73	74
70	75	71	72	71	79	75	71	71	74	75
66	75	75	77	71	72	72	73	71	67	

Make a stem – and – leaf display for the first – round scores. Use two lines per stem.

- A) 6                      5 = score of 65  
     6                      8 7 6 5  
     7                      9 7 5 5 5 5 5  
     7                      4 4 4 4 3 3 3 3 2 2 2 1 1 1 1 1 1 1 1 0
- B) 6                      5 = score of 65  
     6                      5 6 7 8  
     7                      0 1 1 1 1 1 1 1 1 2 2 2 3 3 3 4 4 4 4 5 5 5 5  
     5 7 9
- C) 6                      5 = score of 65  
     6                      5 6 7 8  
     7                      0 1 1 1 1 1 1 1 1 2 2 2 3 3 3 3 4 4 4 4  
     7                      5 5 5 5 5 7 9
- D) 6                      5 = score of 65  
     6                      8 7 6 5  
     7                      9 7 5 5 5 5 5 4 4 4 3 3 3 3 2 2 2 1 1 1 1 1 1

1 1 0

E) none of these choices

ANS: C                      PTS: 1                      DIF: Medium                      REF: Bra\_US\_9e  
OBJ: Make a stem-and-leaf display use two lines per stem                      TOP: 2.3  
KEY: 6                      MSC: 2.3.6a                      NOT: Application

23. Assume that the U.S Open Golf Tournament was played at Congressional Country club, with prizes ranging from \$465,000 for first place to \$5000. Par for the course is 70. The tournament consists of four rounds played on different days. Suppose the scores for each round of the 32 players who placed in the money (more than \$17,000) were given on a web site. The scores for the first round were as follows:

71	65	67	73	74	73	71	71	74	73	71
70	75	71	72	71	75	75	71	71	74	72
66	75	75	75	71	72	72	73	71	67	

The scores for the fourth round for these players were as follows:

69	69	73	74	72	72	70	71	71	70	72
73	73	72	71	71	71	69	70	71	72	71
74	72	71	67	69	70	69	71	73	74	

Compare the two distributions.

- A) Scores are equal for both the rounds.  
B) Scores are lower in the first round.  
C) Scores are lower in the fourth round.  
D) none of these choices

ANS: C                      PTS: 1                      DIF: Medium                      REF: Bra\_US\_9e  
OBJ: Compare the two distributions                      TOP: 2.3                      KEY: 6  
MSC: 2.3.6b                      NOT: Application

24. Use the data given in the following table to make a stem – and – leaf display for milligrams of nicotine per cigarette smoked. In this case, truncate the measurements at the tenths position and use two lines per stem.

Brand		Brand	
Alpine	0.82	Multifilter	0.78
Benson & Hedges	1.11	Newport Lights	0.73
Bull Durham	2.07	Now	0.24
Camel Lights	0.67	Old Gold	1.26
Carlton	0.38	Pall Mall Lights	1.08
Chesterfield	1.04	Raleigh	0.92
Golden Lights	0.76	Salem Ultra	0.42
Kent	0.95	Tareyton	1.01
Kool	1.19	True	0.61
L&M	1.02	Viceroy Rich Light	0.69
Lark Lights	1.01	Virginia Slim	1.02
Marlboro	0.90	Winston Lights	0.82
Merit	0.57		

- A) 0                      2 = 0.2 milligram

- 0      4 2 3  
 0      7 6 6 6 7 8 8 9 9 9  
 1      0 0 0 0 0 1 1 1 2  
 2      0
- B) 0      2 = 0.2 milligram  
 0      4 2 3 7  
 0      6 6 6 7 7 8 8 9 9 9  
 1      0 0 0 0 0 1 1 1 2  
 2      0
- C) 0      2 = 0.2 milligram  
 0      4 2 3 6 7  
 0      7 6 6 8 7 7 8 8 9 9 9  
 1      0 0 0 0 0 1 1 1 2  
 2      0
- D) 0      2 = 0.2 milligram  
 0      2 3 4  
 0      6 6 6 7 7 7 8 8 9 9 9  
 1      0 0 0 0 0 0 0 1 1 2  
 2      0
- E) none of these choices

ANS: D                      PTS: 1                      DIF: Medium                      REF: Bra\_US\_9e  
 OBJ: Make a stem-and-leaf display use two lines per stem                      TOP: 2.3  
 KEY: 7                      MSC: 2.3.7                      NOT: Application