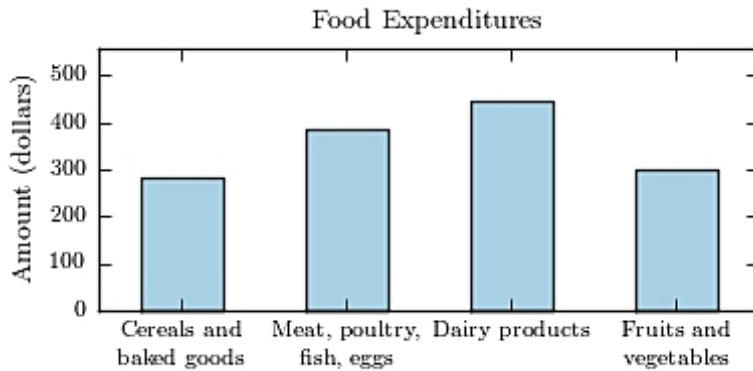


MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) The following bar graph presents the average amount a certain family spent, in dollars, on food categories in a recent year. 1) _____

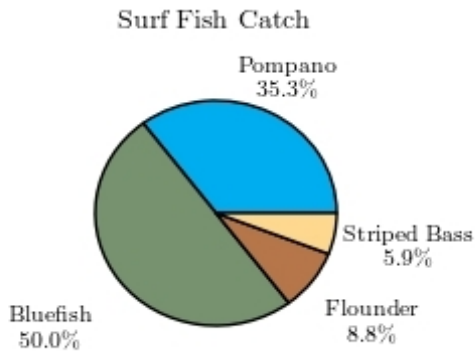
On which food category was the most money spent?



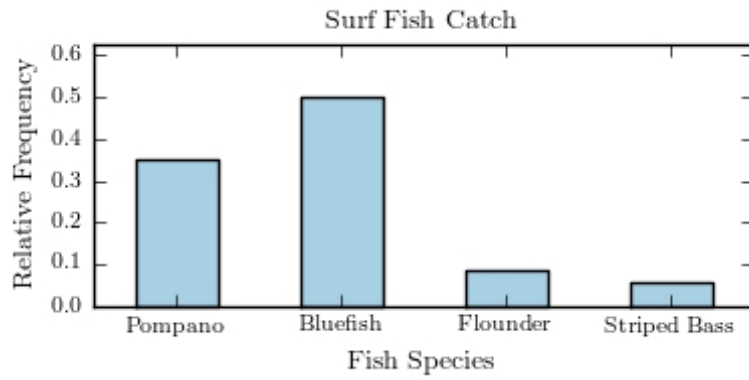
- A) Fruits and vegetables
B) Cereals and baked goods
C) Meat poultry, fish, eggs
D) Dairy products

- 2) The following pie chart presents the percentages of fish caught in each of four ratings cate 2) _____

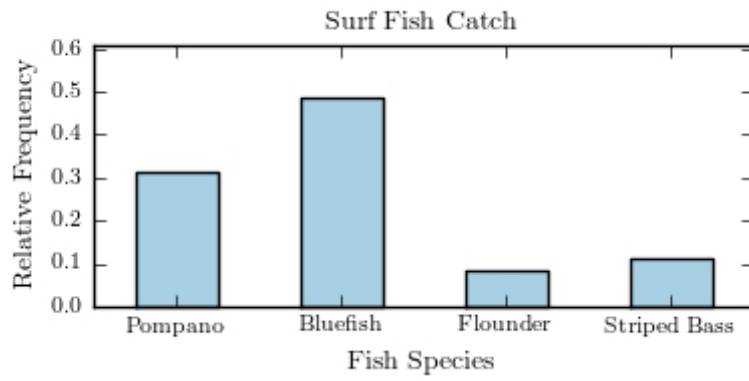
Match this pie chart with its corresponding bar graph.



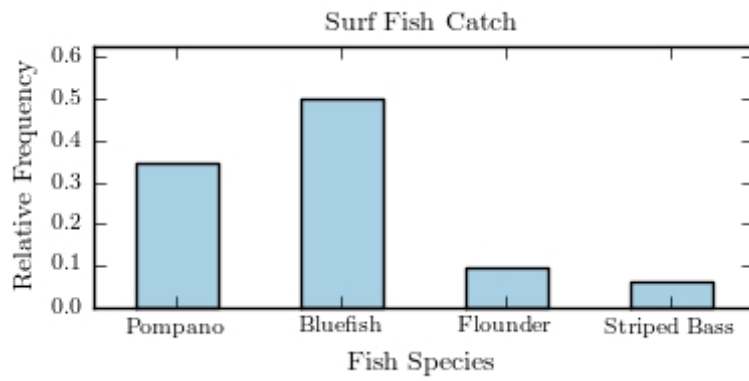
A)



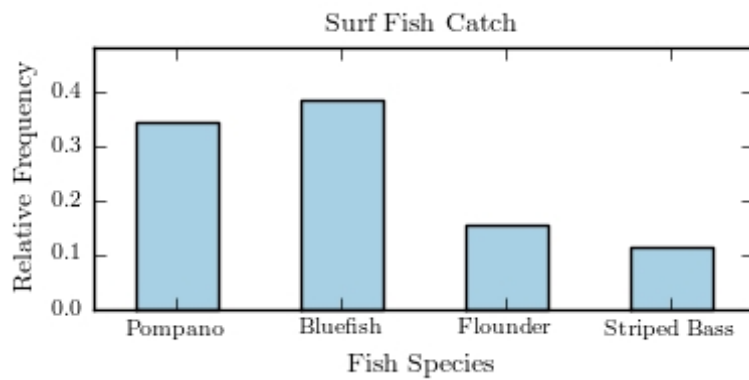
B)



C)

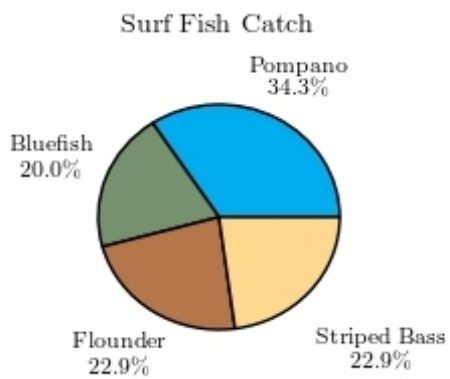


D)

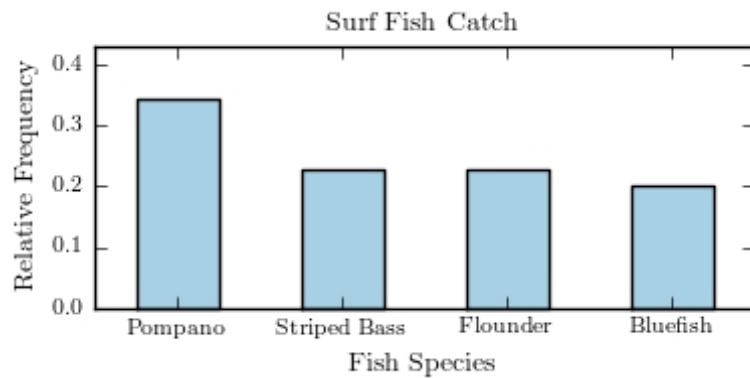


3) The following pie chart presents the percentages of fish caught in each of four ratings categories 3) _____

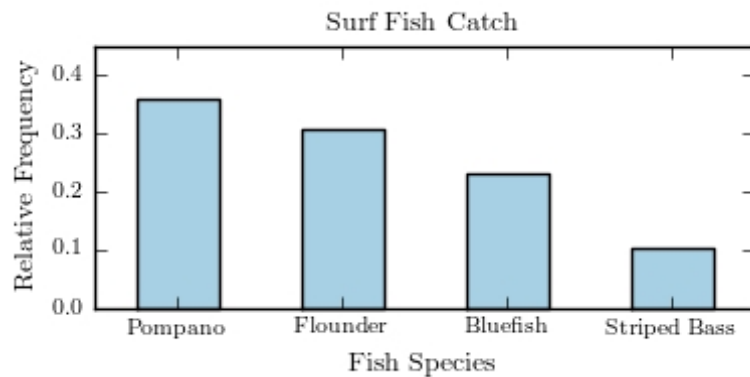
Match this pie chart with its corresponding Pareto chart.



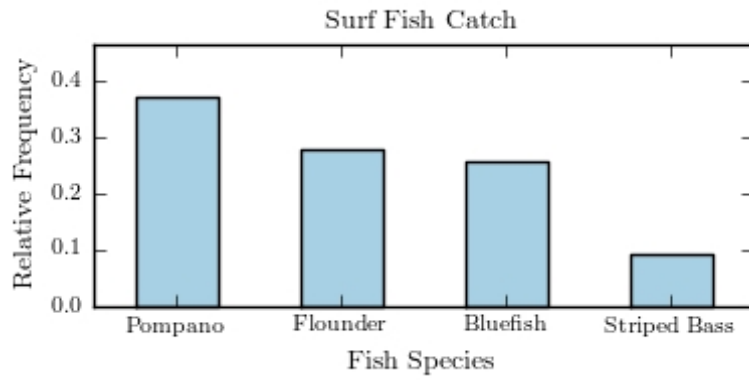
A)



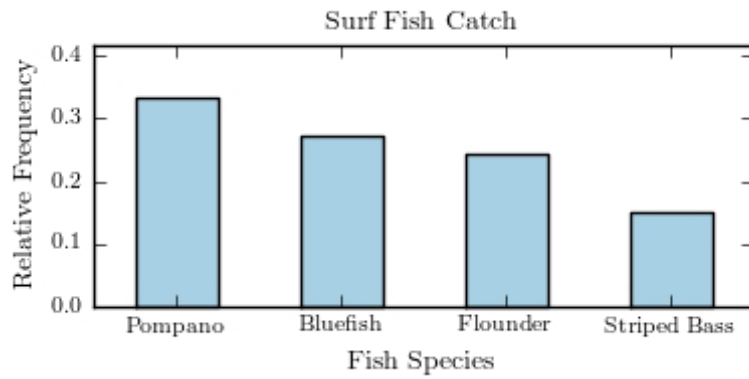
B)



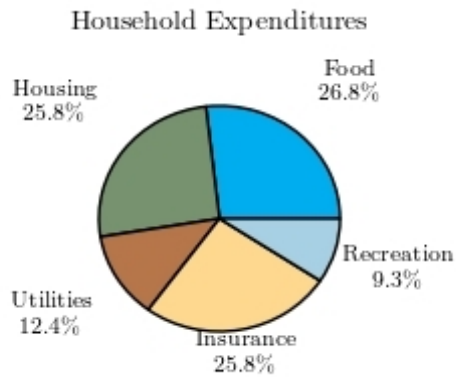
C)



D)



4) Following is a pie chart that presents the percentages spent by a certain household on its largest annual expenditures. What percentage of the money spent was spent on food, housing and utilities? _____



A) 50%

B) 52.6%

C) 61.9%

D) 65%

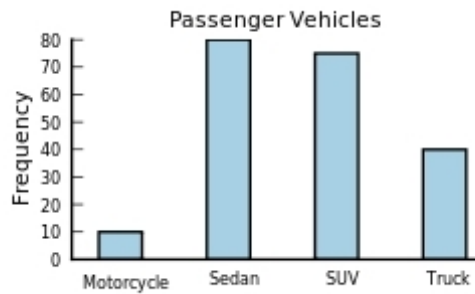
5) The following frequency distribution presents the frequency of passenger vehicles that pass through a certain intersection from 8:00 AM to 9:00 AM on a particular day. _____

Vehicle Type	Frequency
Motorcycle	5
Sedan	75

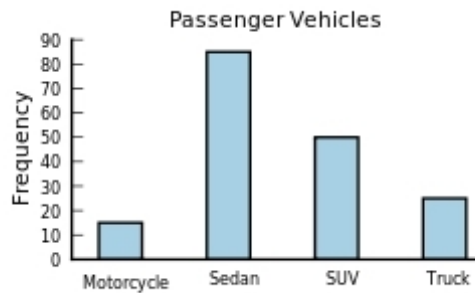
SUV	70
Truck	35

Construct a frequency bar graph for the data.

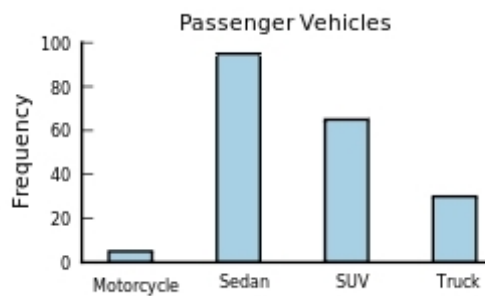
A)



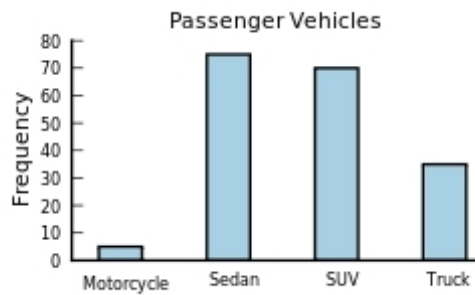
B)



C)



D)



6) The following frequency distribution presents the frequency of passenger vehicles that pass through a certain intersection from 8:00 AM to 9:00 AM on a particular day. 6) _____

Vehicle Type	Frequency
Motorcycle	15
Sedan	80
SUV	88
Truck	34

What is the relative frequency of the Motorcycle category?

- A) 0.17 B) 15 C) 0.069 D) 15%

7) The following frequency distribution presents the frequency of passenger vehicles that pass through a certain intersection from 8:00 AM to 9:00 AM on a particular day. 7) _____

Vehicle Type	Frequency
Motorcycle	7
Sedan	63
SUV	84
Truck	30

Construct a relative frequency distribution for the data.

A)

Vehicle Type	Relative Frequency
Motorcycle	0.083
Sedan	0.75
SUV	1
Truck	0.357

B)

Vehicle Type	Relative Frequency
Motorcycle	0.038
Sedan	0.342
SUV	0.457
Truck	0.163

C)

Vehicle Type	Relative Frequency
Motorcycle	0.038%
Sedan	0.342%
SUV	0.457%
Truck	0.163%

D)

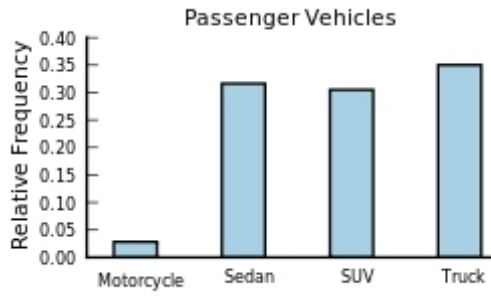
Vehicle Type	Relative Frequency
Motorcycle	0.07
Sedan	0.63
SUV	0.84
Truck	0.3

8) The following frequency distribution presents the frequency of passenger vehicles that pass through a certain intersection from 8:00 AM to 9:00 AM on a particular day. 8) _____

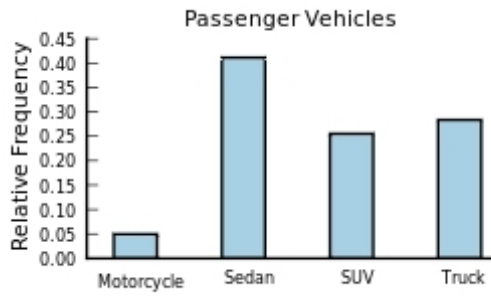
Vehicle Type	Frequency
Motorcycle	9
Sedan	54
SUV	27

Construct a relative frequency bar graph for the data.

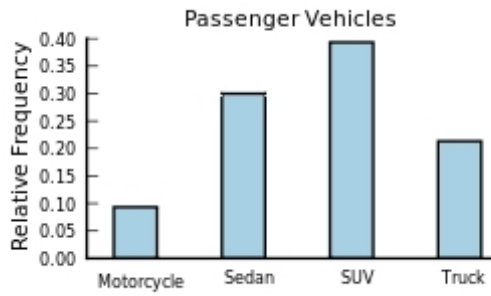
A)



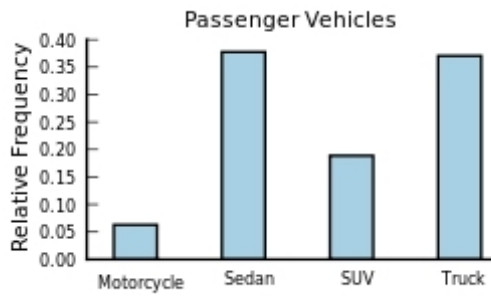
B)



C)



D)

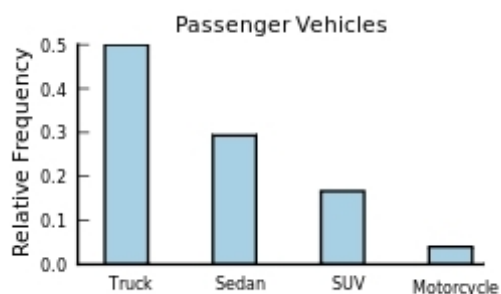


9) The following frequency distribution presents the frequency of passenger vehicles that pass through a certain intersection from 8:00 AM to 9:00 AM on a particular day. 9) _____

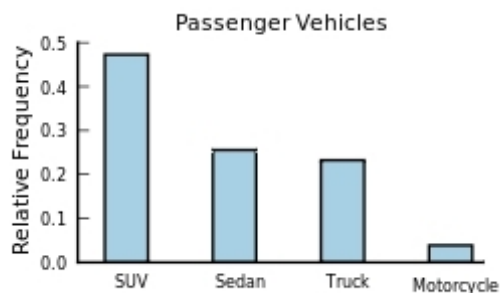
Vehicle Type	Frequency
Motorcycle	7
Sedan	22
SUV	58
Truck	67

Construct a relative frequency Pareto chart for the data.

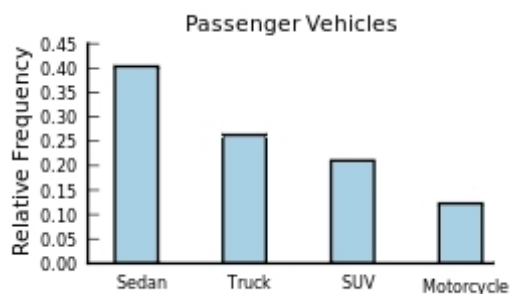
A)



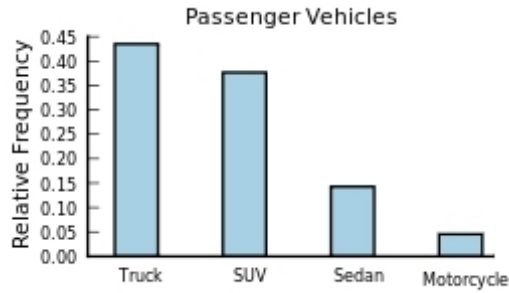
B)



C)



D)

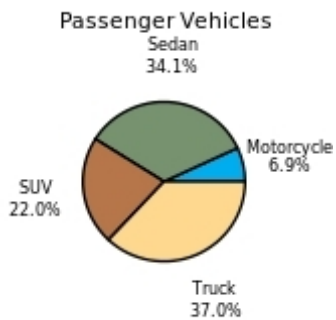


10) The following frequency distribution presents the frequency of passenger vehicles that pass through a certain intersection from 8:00 AM to 9:00 AM on a particular day. 10) _____

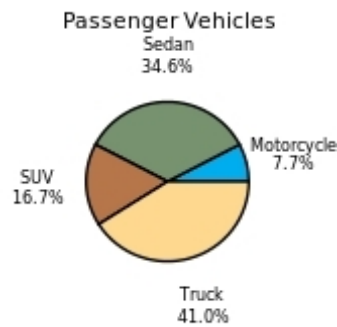
Vehicle Type	Frequency
Motorcycle	12
Sedan	54
SUV	26
Truck	64

Construct a pie chart for the data.

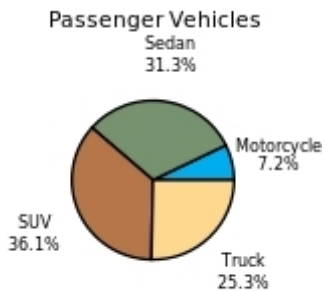
A)



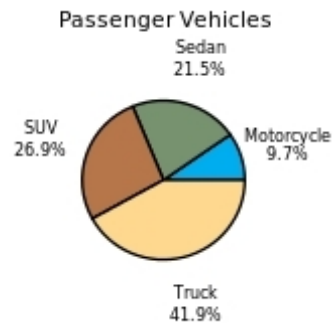
B)



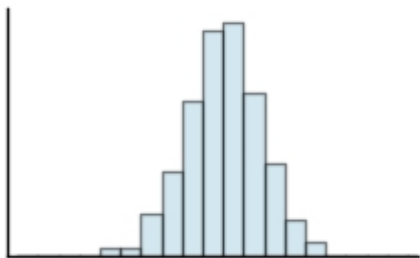
C)



D)

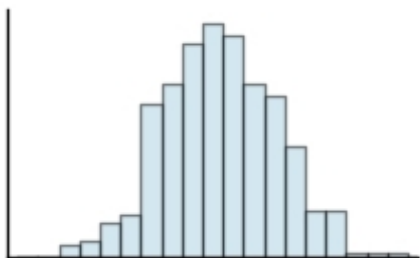


11) Classify the histogram as skewed to the left, skewed to the right, or approximately symmetric. 11) _____



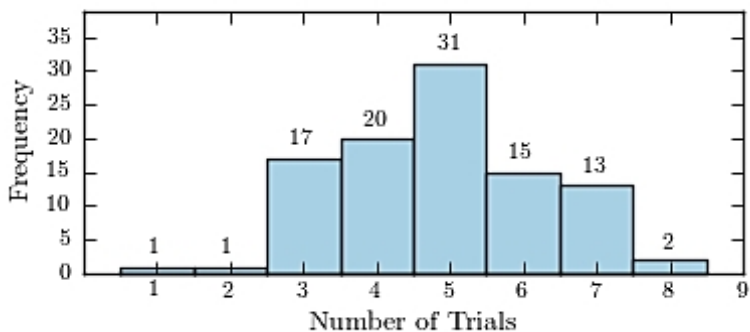
- A) skewed to the left
- B) skewed to the right
- C) approximately symmetric

12) Classify the histogram as unimodal or bimodal. 12) _____



- A) unimodal
- B) bimodal

13) One hundred students are shown an eight-digit number on a piece of cardboard for three seconds and are asked to then recite the number from memory. The process is repeated until the student accurately recites the entire number from memory. The following histogram presents the number of trials it took each student to memorize the number.



How many students memorized the number in three trials or less?

- A) 2
- B) 81
- C) 19
- D) 24

- 14) The following frequency distribution presents the weights in pounds (lb) of a sample of visitors at a health clinic. 14) _____

Weight (lb)	Frequency
100-103	2
104-107	1
108-111	4
112-115	4
116-119	10
120-123	9
124-127	4
128-131	1

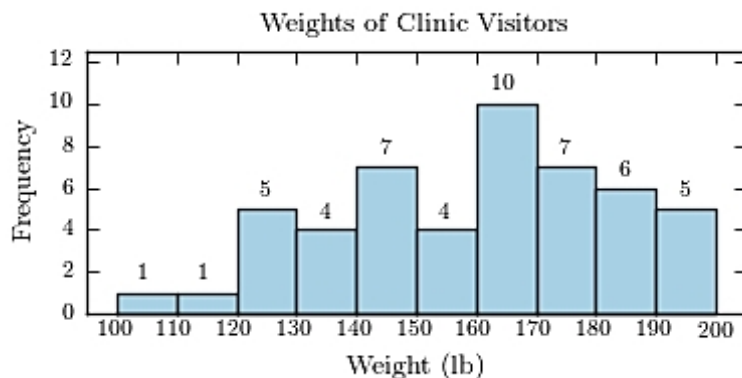
What is the class width?

- A) 4 B) 3 C) 32 D) 5
- 15) The following frequency distribution presents the weights in pounds (lb) of a sample of visitors at a health clinic. 15) _____

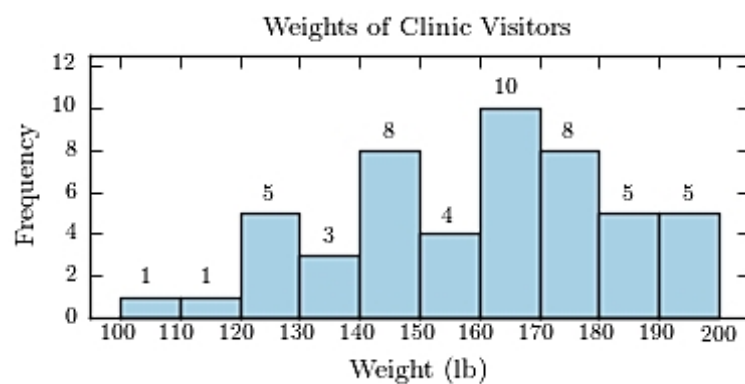
Weight (lb)	Frequency
100-109	1
110-119	1
120-129	5
130-139	4
140-149	7
150-159	4
160-169	10
170-179	8
180-189	5
190-199	5

Construct a frequency histogram.

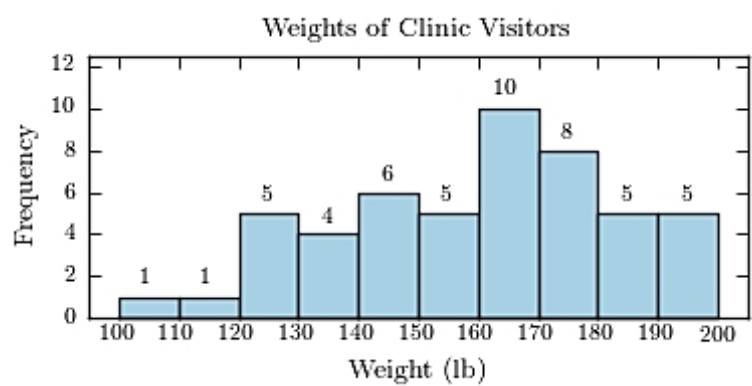
A)



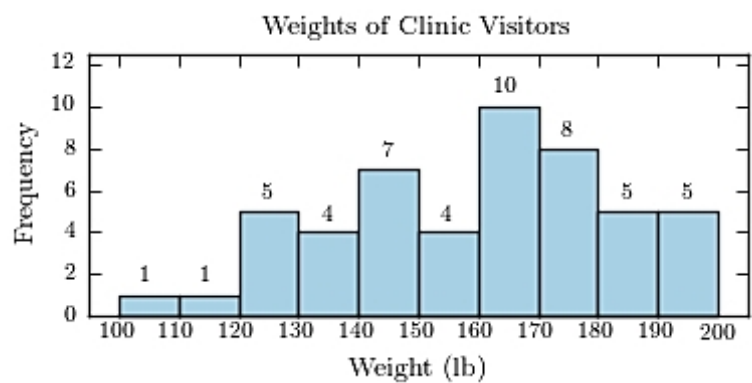
B)



C)



D)

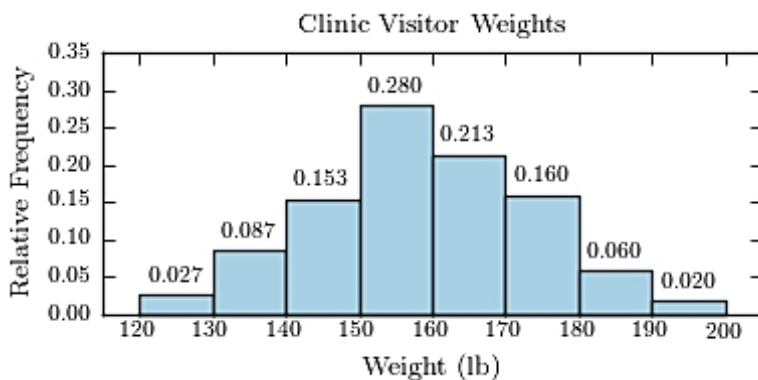


16) The following frequency distribution presents the weights in pounds (lb) of a sample of visitors to a health clinic. 16) _____

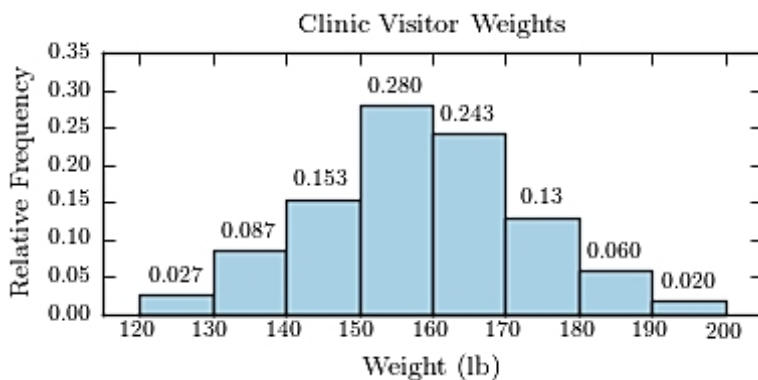
Clinic Visitor Weights	
Weight (lb)	Frequency
120-129	4
130-139	13
140-149	23
150-159	42
160-169	32
170-179	24
180-189	9
190-199	3

Construct a relative frequency histogram.

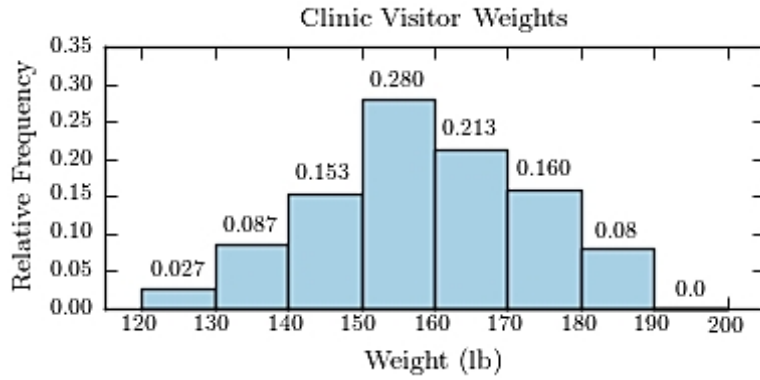
A)



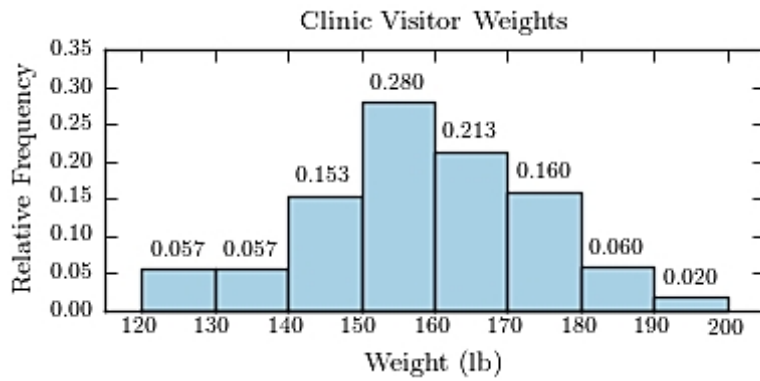
B)



C)



D)



17) The following table presents the purchase totals (in dollars) of a random sample of gasoline purchases at a convenience store. 17) _____

Construct a frequency distribution using a class width of 10, and using 0 as the lower class for the first class.

76.59	48.55	93.66	60.17	39.10
93.28	65.43	34.12	80.41	77.16
80.07	93.46	39.19	43.84	44.70
68.74	89.98	6.97	52.86	68.93

A)

Convenience Store Gas Purchases	
Amount (dollars)	Frequency
0.00-9.99	1
10.00-19.99	0
20.00-29.99	1
30.00-39.99	2
40.00-49.99	3
50.00-59.99	1
60.00-69.99	4
70.00-79.99	2
80.00-89.99	3
90.00-99.99	3

B)

Convenience Store Gas Purchases	
Amount (dollars)	Frequency
0.00-9.99	1
10.00-19.99	0
20.00-29.99	0
30.00-39.99	4
40.00-49.99	2
50.00-59.99	1
60.00-69.99	4
70.00-79.99	2
80.00-89.99	3
90.00-99.99	3

C)

Convenience Store Gas Purchases	
Amount (dollars)	Frequency
0.00-9.99	1
10.00-19.99	0
20.00-29.99	0
30.00-39.99	3
40.00-49.99	3
50.00-59.99	1
60.00-69.99	4
70.00-79.99	2
80.00-89.99	3
90.00-99.99	3

D)

Convenience Store Gas Purchases	
Amount (dollars)	Frequency
0.00-9.99	1
10.00-19.99	0
20.00-29.99	0
30.00-39.99	3
40.00-49.99	3
50.00-59.99	1
60.00-69.99	4
70.00-79.99	2
80.00-89.99	4
90.00-99.99	2

18) The following table presents the purchase totals (in dollars) of a random sample of gasoline purchases at a convenience store. 18) _____

Construct a relative frequency distribution using a class width of 10, and using 0 as the lower limit for the first class.

57.46	27.21	6.12	97.99	68.22
28.97	39.41	77.56	37.06	73.09
88.82	61.29	93.24	65.96	42.37
94.38	7.67	16.95	71.17	65.37

A)

Convenience Store Gas Purchases	
Amount (dollars)	Relative Frequency
0.00-9.99	0.100
10.00-19.99	0.050
20.00-29.99	0.100
30.00-39.99	0.100
40.00-49.99	0.050
50.00-59.99	0.050
60.00-69.99	0.200
70.00-79.99	0.150
80.00-89.99	0.050
90.00-99.99	0.150

B)

Convenience Store Gas Purchases	
Amount (dollars)	Relative Frequency
0.00-9.99	0.100
10.00-19.99	0.050
20.00-29.99	0.100
30.00-39.99	0.100
40.00-49.99	0.030
50.00-59.99	0.070
60.00-69.99	0.200
70.00-79.99	0.150
80.00-89.99	0.050
90.00-99.99	0.150

C)

Convenience Store Gas Purchases	
Amount (dollars)	Relative Frequency
0.00-9.99	0.100
10.00-19.99	0.050
20.00-29.99	0.100
30.00-39.99	0.080
40.00-49.99	0.070
50.00-59.99	0.050
60.00-69.99	0.200
70.00-79.99	0.150
80.00-89.99	0.050
90.00-99.99	0.150

D)

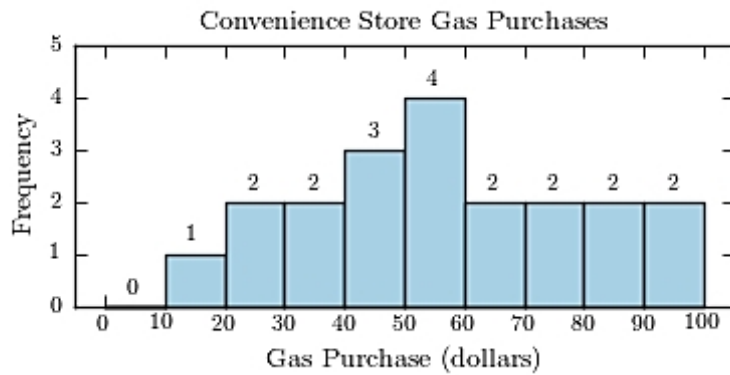
Convenience Store Gas Purchases	
Amount (dollars)	Relative Frequency
0.00-9.99	0.100
10.00-19.99	0.050
20.00-29.99	0.100
30.00-39.99	0.100
40.00-49.99	0.050
50.00-59.99	0.040
60.00-69.99	0.210
70.00-79.99	0.150
80.00-89.99	0.050
90.00-99.99	0.150

19) The following table presents the purchase totals (in dollars) of a random sample of gasoline purchases at a convenience store. 19) _____

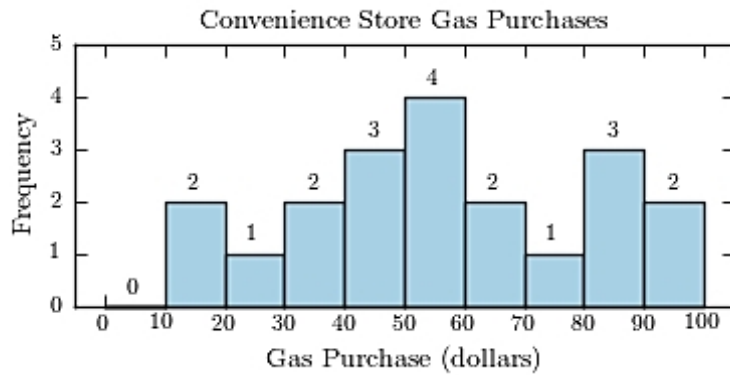
Construct a frequency histogram using a class width of 10, and using 0 as the lower class the first class.

69	55	17	55	81
66	99	44	34	79
22	83	91	15	35
53	74	40	55	49

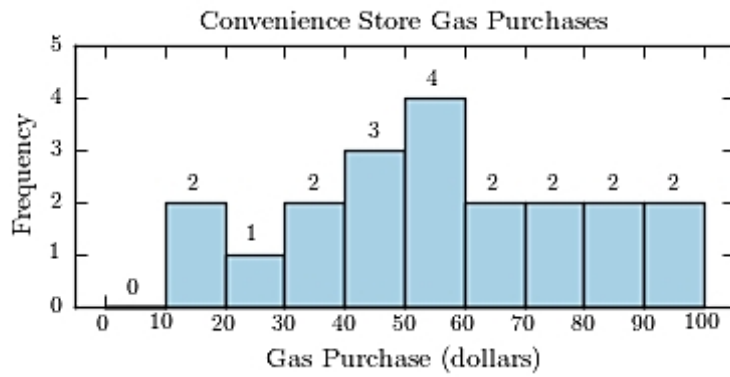
A)



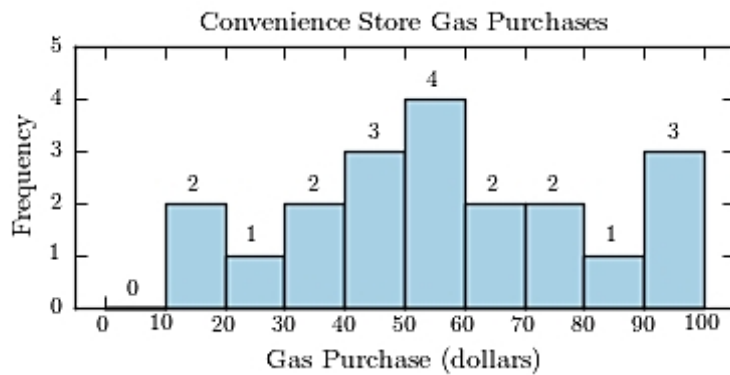
B)



C)



D)

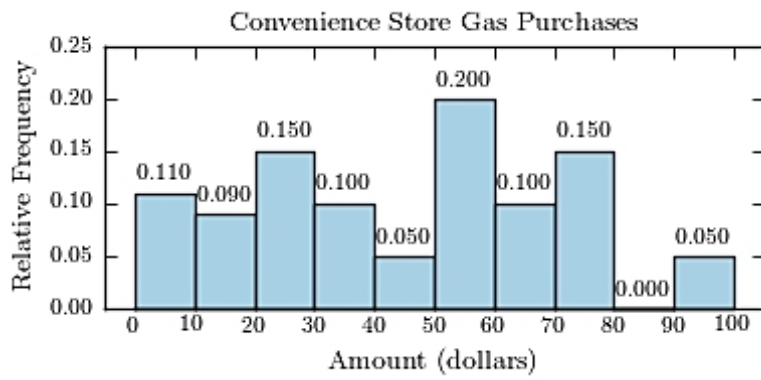


20) The following table presents the purchase totals (in dollars) of a random sample of gasoline purchases at a convenience store. 20) _____

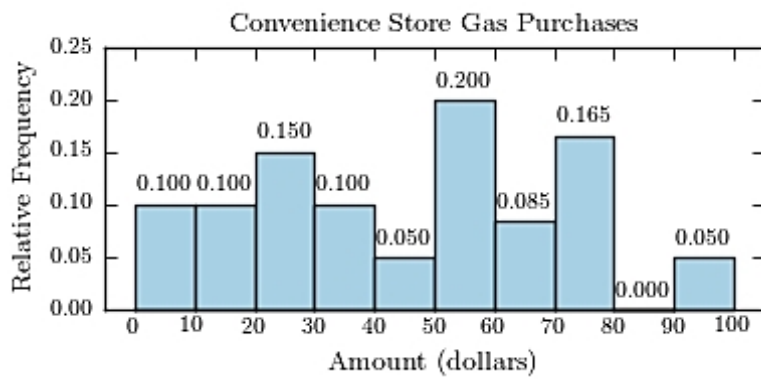
Construct a relative frequency histogram using a class width of 10, and using 0 as the low limit for the first class.

51.13	6.11	36.05	22.27	94.54
49.64	52.78	79.28	51.88	6.29
33.57	53.92	24.91	23.89	79.10
14.86	63.94	15.87	76.44	60.96

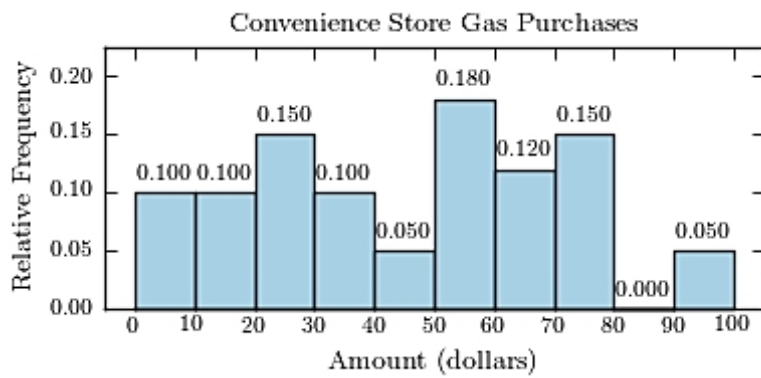
A)



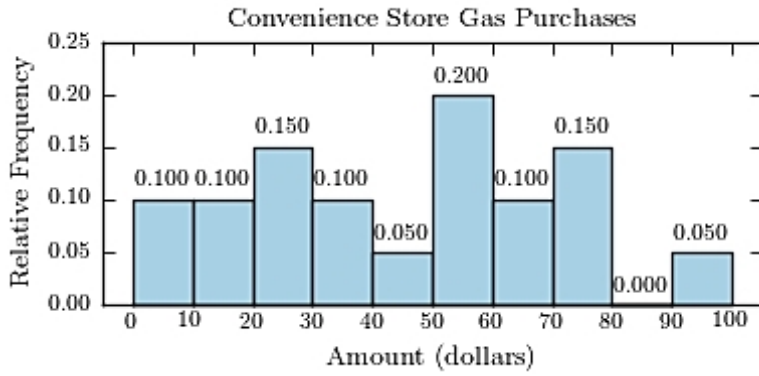
B)



C)



D)

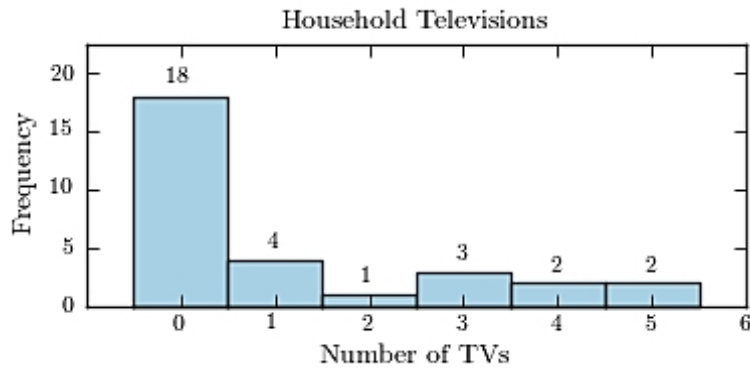


21) Thirty households were surveyed for the number of televisions in each home. Following a _____ results.

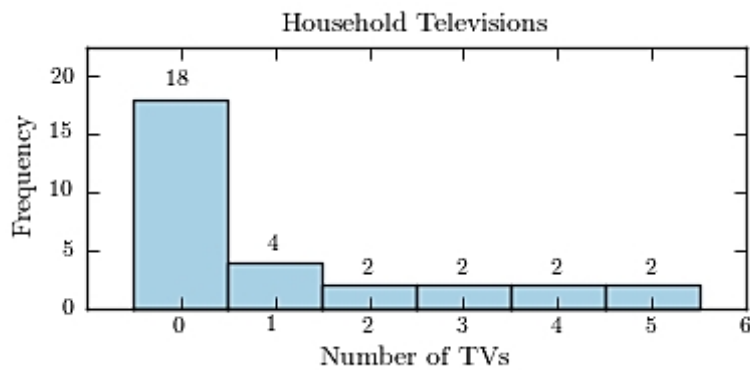
0	1	0	2	3	0	0	0	0	5
4	1	0	0	0	4	0	5	1	0
0	0	0	3	1	1	0	0	0	0

Construct a frequency histogram.

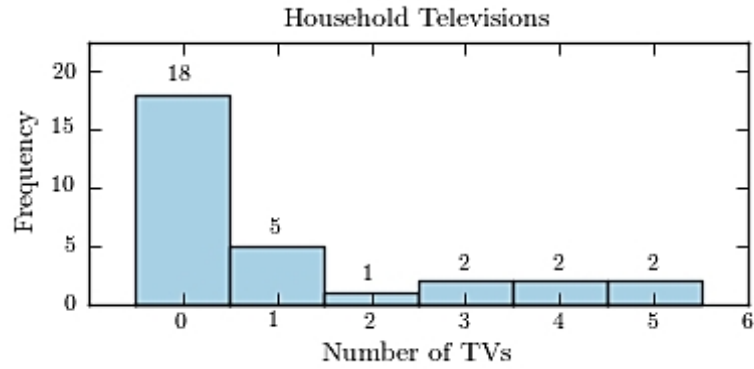
A)



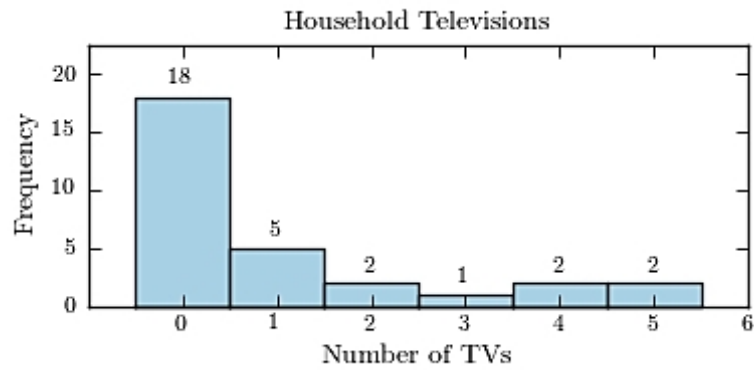
B)



C)



D)

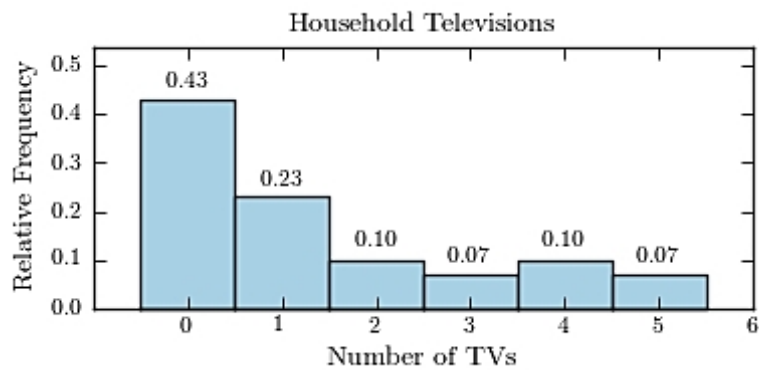


22) Thirty households were surveyed for the number of televisions in each home. Following are the results.

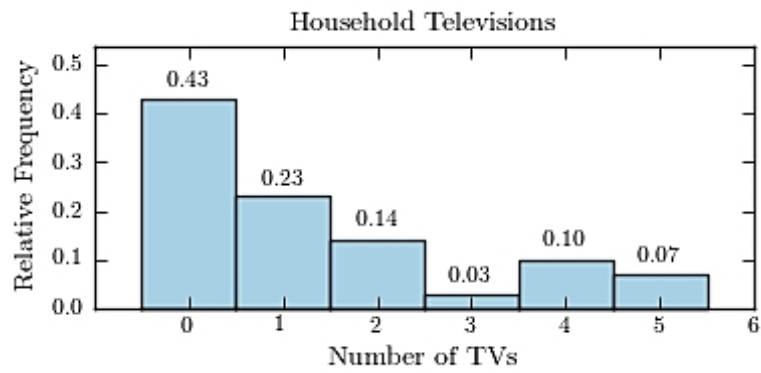
0	0	0	0	1	1	0	4	2	5
0	2	1	0	2	4	0	0	0	1
0	1	1	5	3	0	4	1	3	0

Construct a relative frequency histogram.

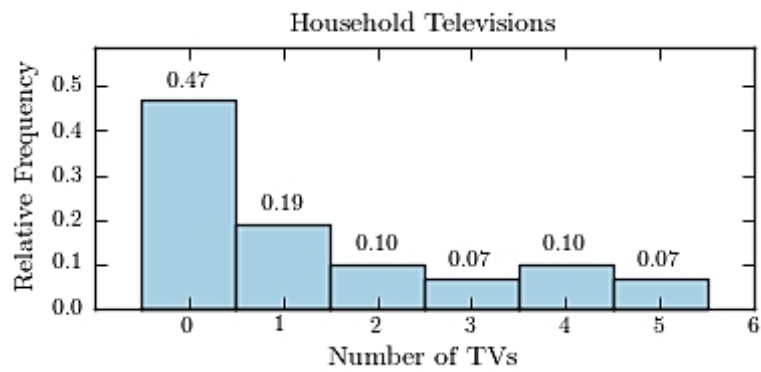
A)



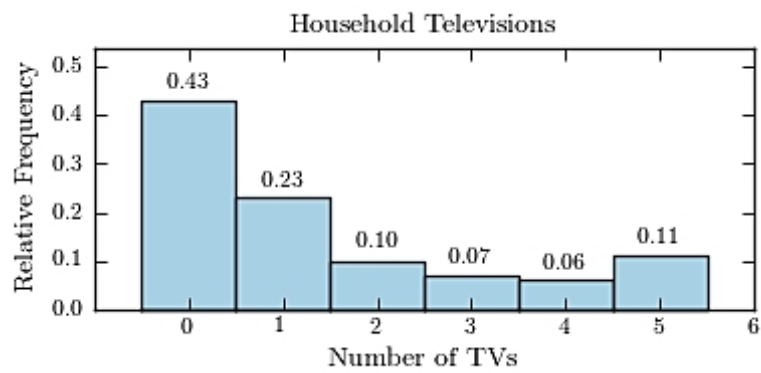
B)



C)



D)

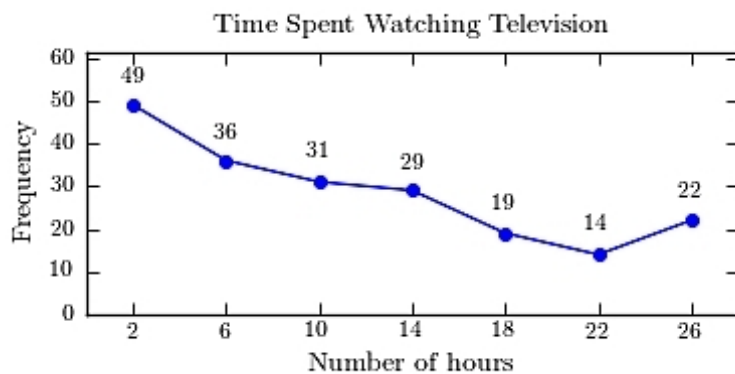


23) A sample of 200 high school students were asked how many hours per week they spend watching television. The following frequency distribution presents the results. 23) _____

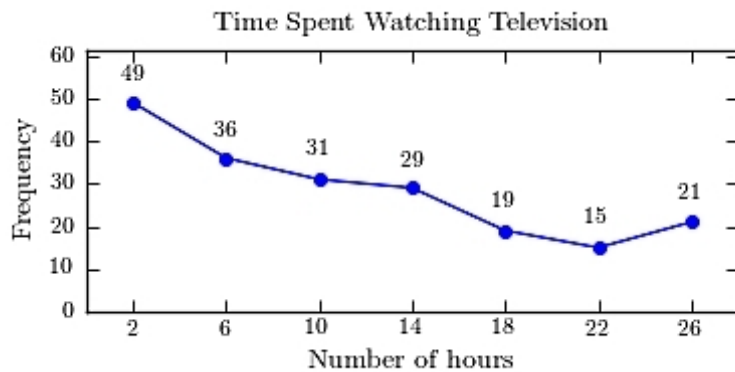
Time Spent Watching Television	
Number of hours	Frequency
0.0-3.9	49
4.0-7.9	36
8.0-11.9	31
12.0-15.9	29
16.0-19.9	19
20.0-23.9	15
24.0-27.9	21

Construct a frequency polygon for the frequency distribution.

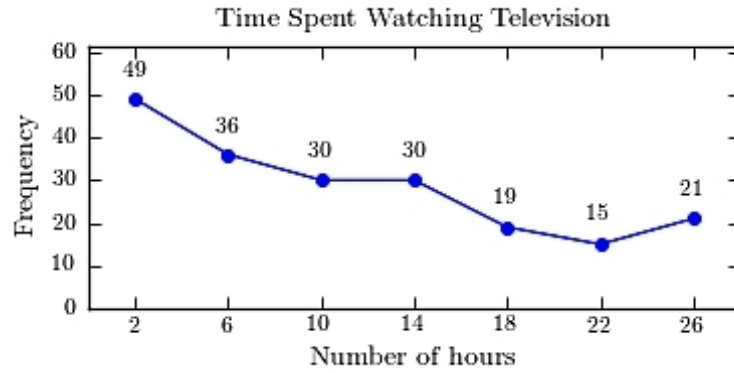
A)



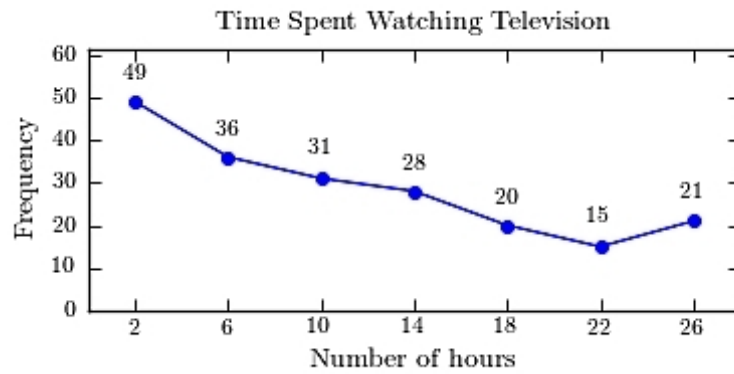
B)



C)



D)

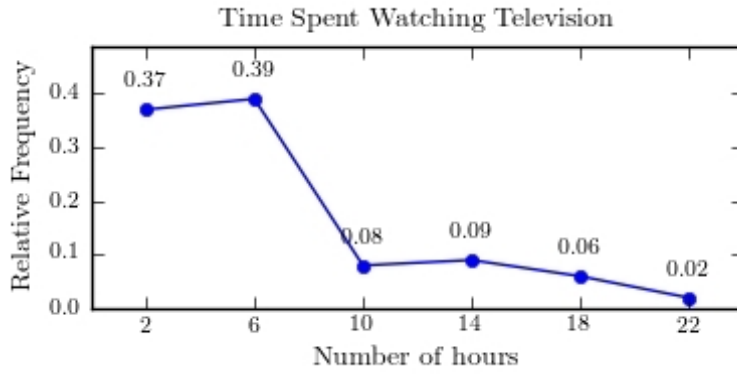


24) A sample of 200 high school students were asked how many hours per week they spend watching television. The following frequency distribution presents the results. 24) _____

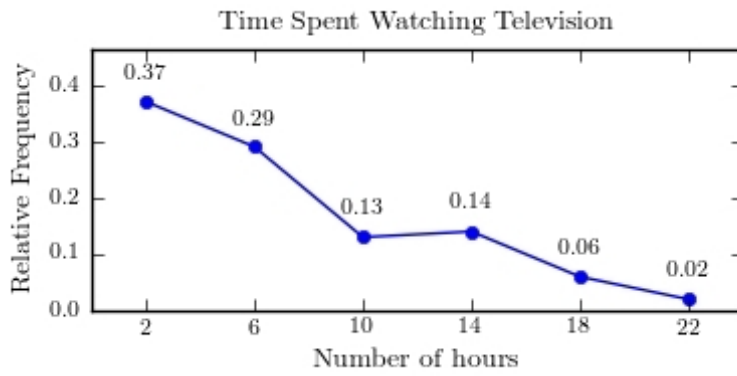
Time Spent Watching Television	
Number of hours	Frequency
0.0-3.9	74
4.0-7.9	57
8.0-11.9	35
12.0-15.9	18
16.0-19.9	12
20.0-23.9	4

Construct a relative frequency polygon for the frequency distribution.

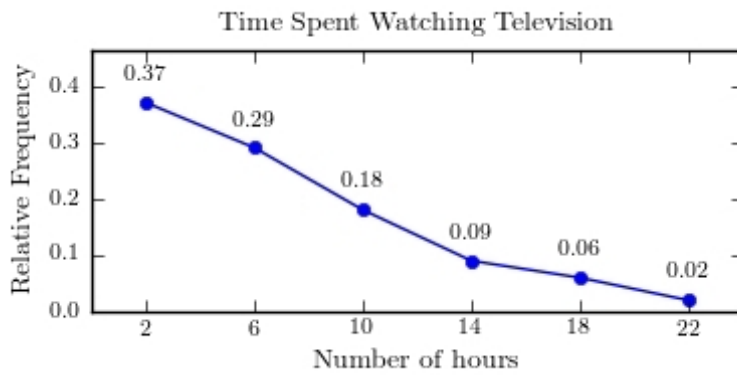
A)



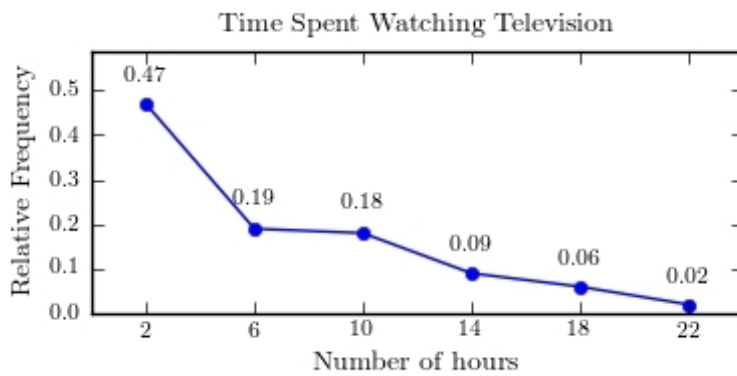
B)



C)



D)

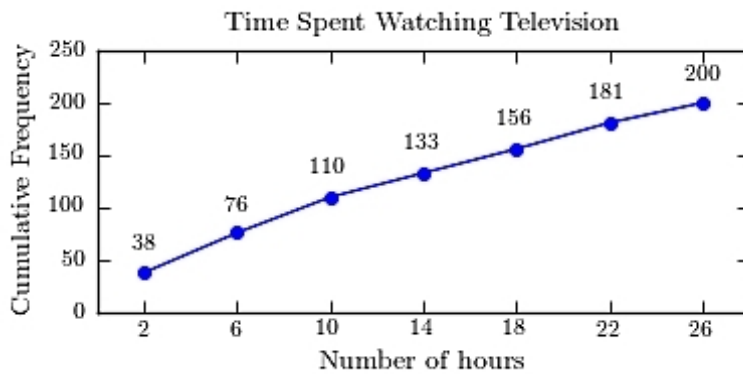


25) A sample of 200 high school students were asked how many hours per week they spend watching television. The following frequency distribution presents the results. 25) _____

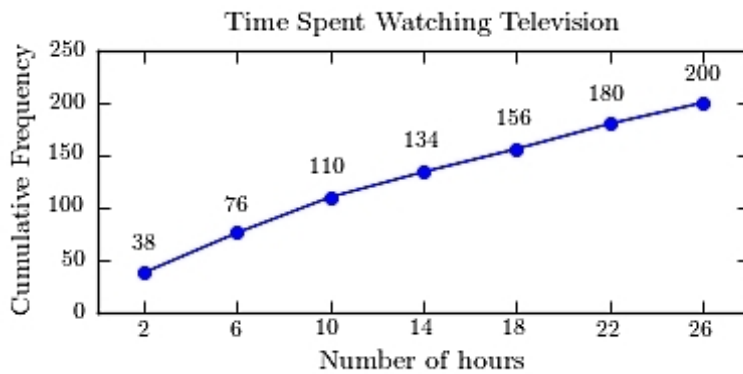
Time Spent Watching Television	
Number of hours	Frequency
0.0-3.9	38
4.0-7.9	38
8.0-11.9	34
12.0-15.9	23
16.0-19.9	24
20.0-23.9	23
24.0-27.9	20

Construct a frequency ogive for the frequency distribution.

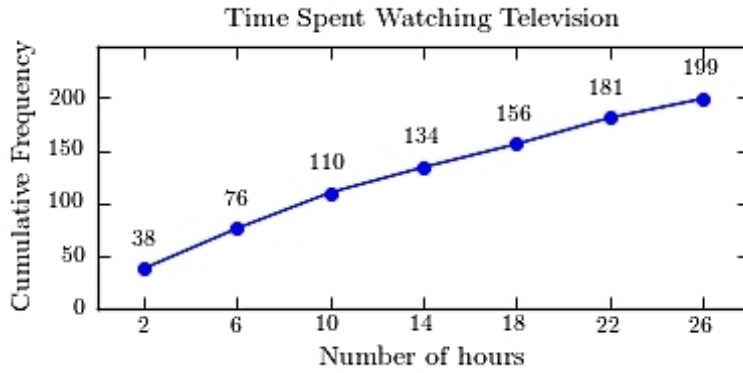
A)



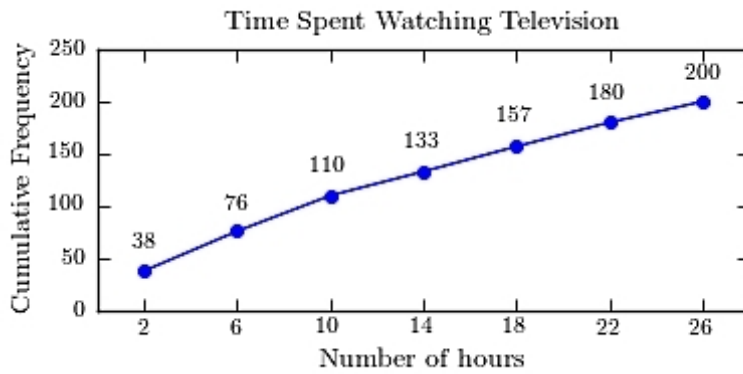
B)



C)



D)

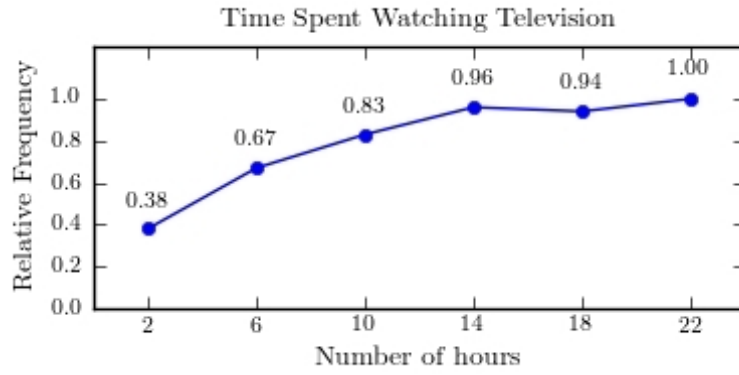


26) A sample of 200 high school students were asked how many hours per week they spend watching television. The following frequency distribution presents the results. 26) _____

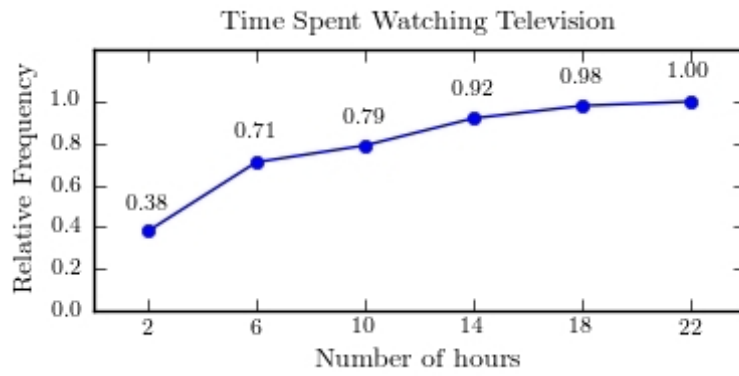
Time Spent Watching Television	
Number of hours	Frequency
0.0-3.9	76
4.0-7.9	57
8.0-11.9	32
12.0-15.9	18
16.0-19.9	13
20.0-23.9	4

Construct a relative frequency ogive for the frequency distribution.

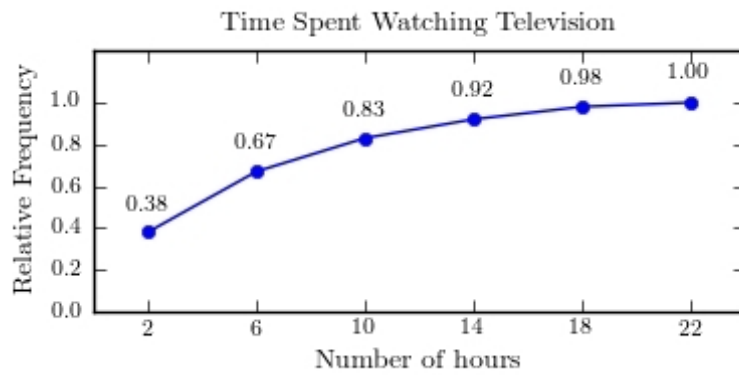
A)



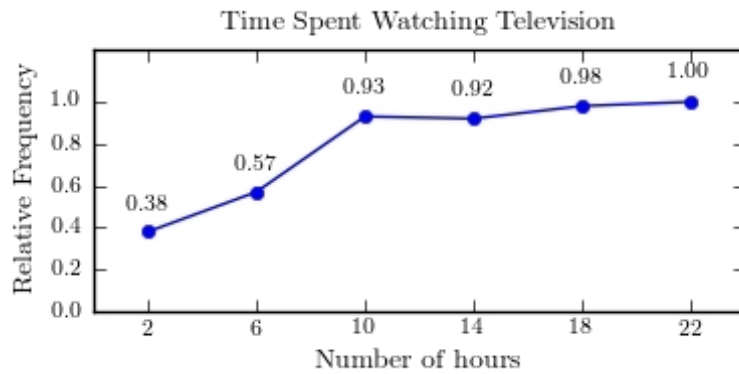
B)



C)



D)



27) Construct a stem-and-leaf plot for the following data.

27) _____

28	20	54	52	26	17	31	53	40	20
51	20	28	58	40	10	25	43	40	54

A)

1	07
2	0005688
3	1
4	000
5	1233448

B)

1	07
2	0005688
3	1
4	0003
5	13448
6	2

C)

1	07
2	000568
3	18
4	0003
5	123448

D)

1	07
2	0005688
3	1
4	0003
5	123448

28) Construct a stem-and-leaf plot for the following data, in which the leaf represents the tent 28) _____

6.7	8.3	10.3	9.0	10.3	8.8	9.1	6.9	10.8	6.6	10.3	10.7
10.3	3.8	10.6	5.0	5.3	8.1	9.1	9.6	10.9	7.8	8.8	9.8

A)

3	8
4	3
5	0
6	79
7	68
8	1388
9	01168
10	33336789

B)

3	8
4	
5	03
6	679
7	8
8	1388
9	011688
10	333367
11	9

C)

3	8
4	
5	03
6	679
7	88
8	138
9	01168
10	3336789
11	3

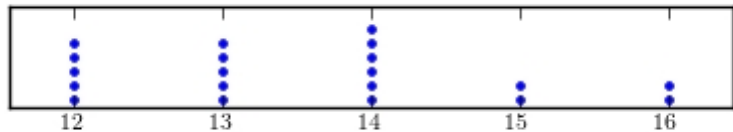
D)

3	8
4	
5	03
6	679
7	8
8	1388
9	01168
10	33336789

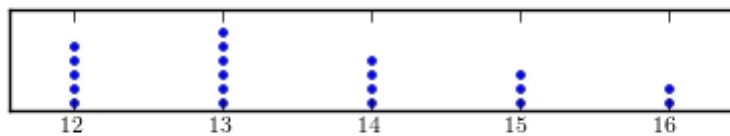
29) Construct a dotplot for the following data. 29) _____

16	13	14	12	15	13	14	14	12	12
14	13	13	14	12	13	15	14	12	16

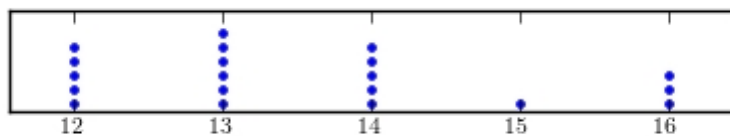
A)



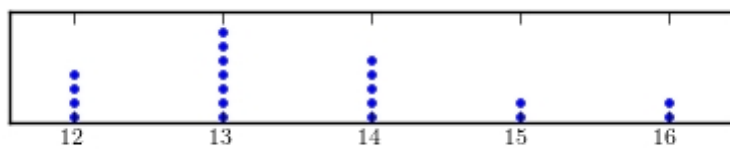
B)



C)



D)

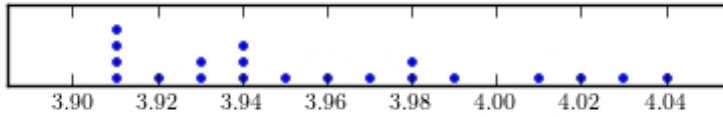


30) Construct a dotplot for the following data.

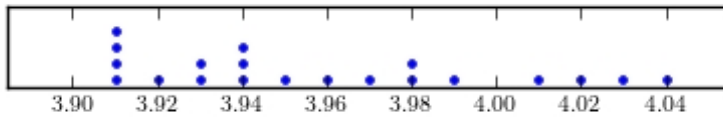
30) _____

3.94	3.93	3.98	3.91	4.03	3.95	4.01	3.98	3.91	3.97
3.94	3.94	4.04	3.96	4.02	3.91	3.91	3.99	3.91	3.93

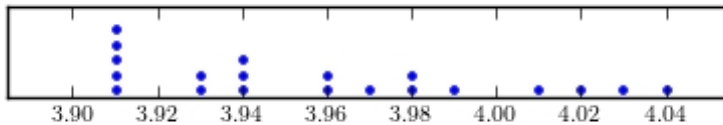
A)



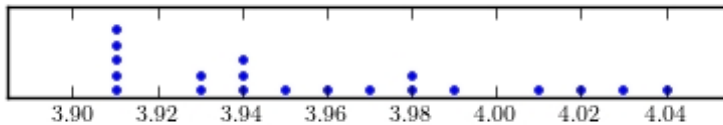
B)



C)



D)

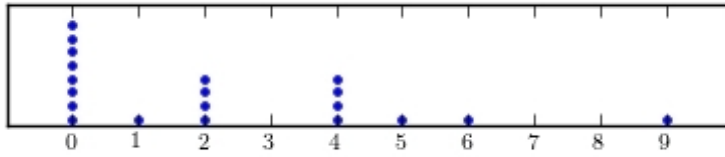


31) Following are the numbers of Dean's List students in a random sample of 20 university courses. Construct a dotplot for these data.

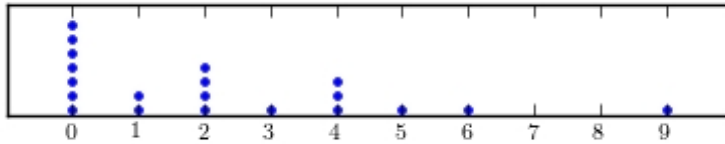
31) _____

9	2	0	0	4
2	0	0	4	0
4	2	0	0	5
6	1	2	0	4

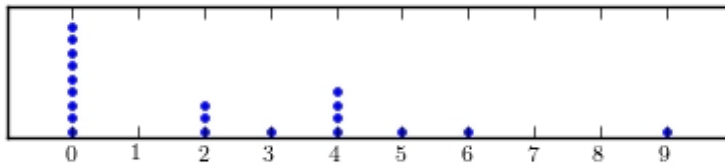
A)



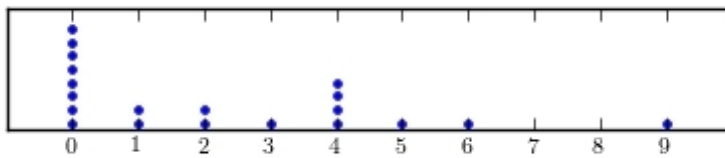
B)



C)



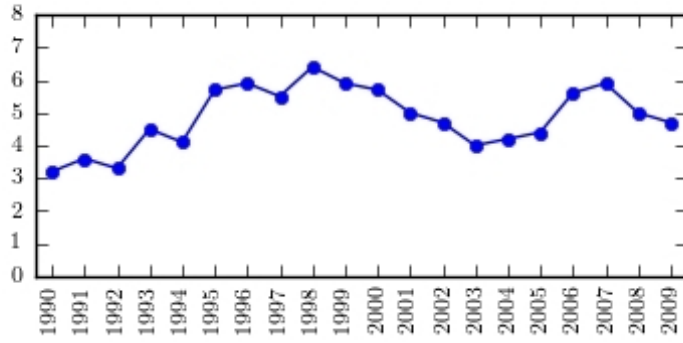
D)



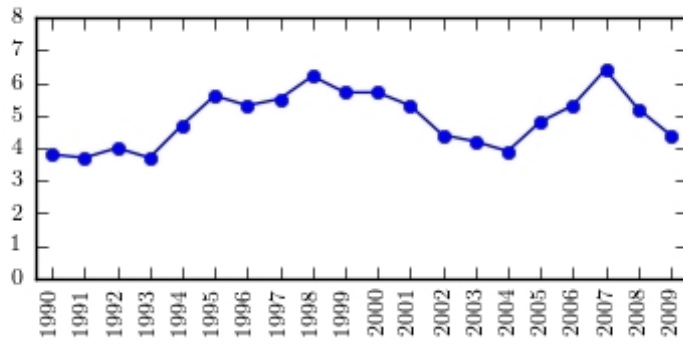
32) The following table presents the rate of population growth of a suburb of Atlanta, Georgia of the years 1990 through 2009. Construct a time-series plot of the growth rate.

Year	Percent Growth	Year	Percent Growth
1990	3.1	2000	5.5
1991	3.3	2001	5.2
1992	4.3	2002	4.4
1993	3.5	2003	4.2
1994	4.4	2004	4.1
1995	5.7	2005	4.7
1996	5.2	2006	5.9
1997	6.4	2007	6.2
1998	5.6	2008	5.2
1999	5.8	2009	4.6

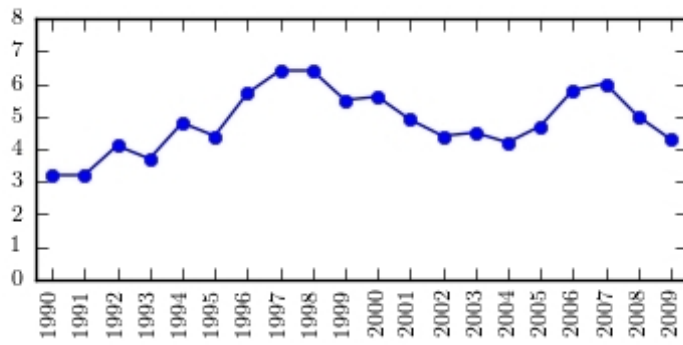
A)



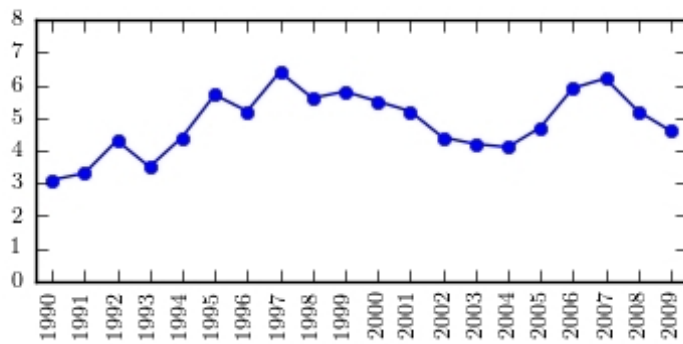
B)



C)

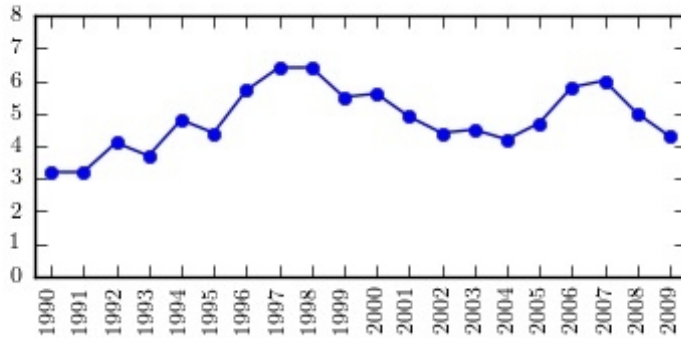


D)



33) The following time-series plot presents the population growth (in percent) of a suburb of Atlanta, Georgia for each of the years 1990 through 2009. Estimate the rate of growth in 1,999.

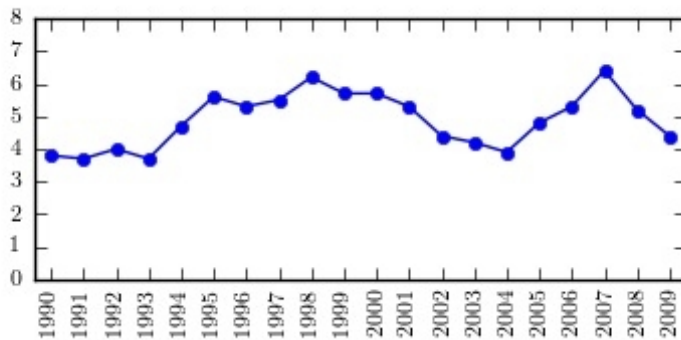
33) _____



- A) 4.6% B) 5.2% C) 4.9% D) 5.5%

34) The following time-series plot presents the population growth (in percent) of a suburb of Atlanta, Georgia for each of the years 1990 through 2009. Estimate the amount by which the rate of growth changed from 1,995 to 2,004.

34) _____

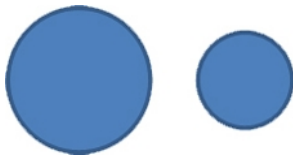


- A) about -1.3 percentage points B) about -1.9 percentage points
 C) about -1.0 percentage points D) about -2.9 percentage points

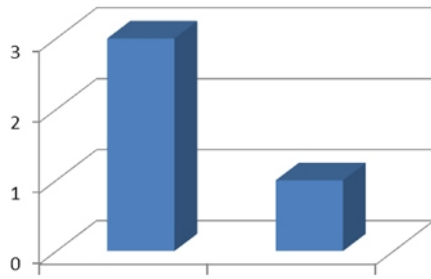
35) The amounts 3 and 2 are compared. Which of the following graphical displays are the least misleading?

35) _____

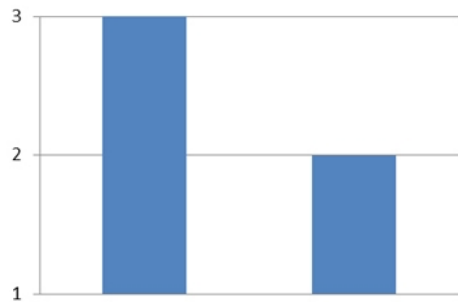
A)



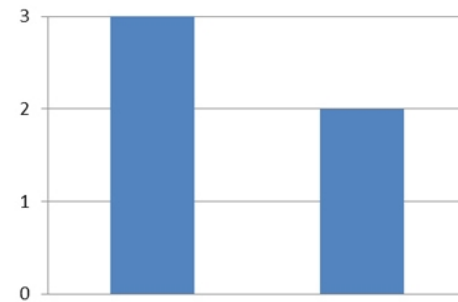
B)



C)



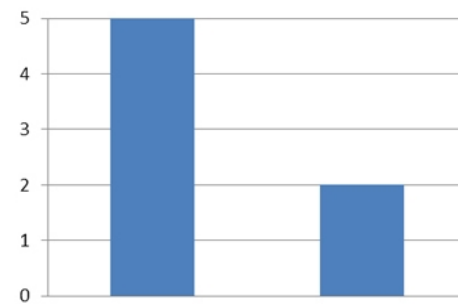
D)



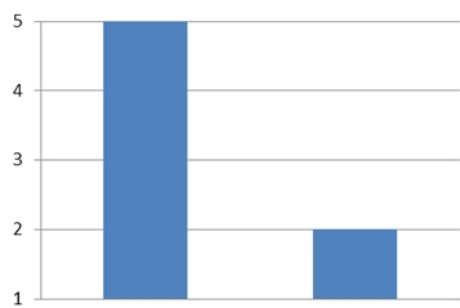
36) The amounts 5 and 2 are compared. Which of the following graphical displays are the least misleading?

36) _____

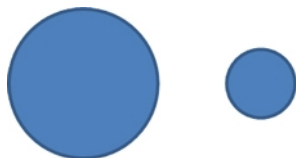
A)



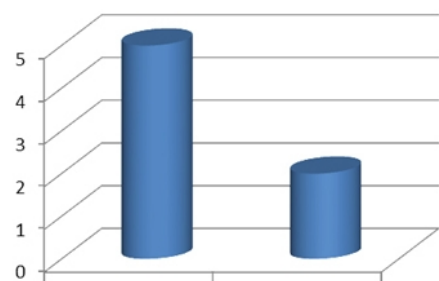
B)



C)



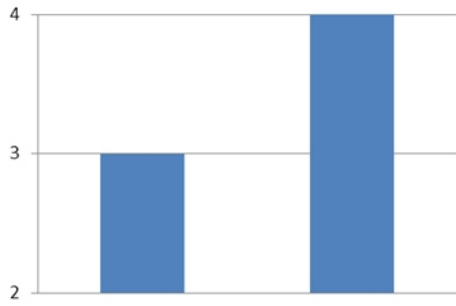
D)



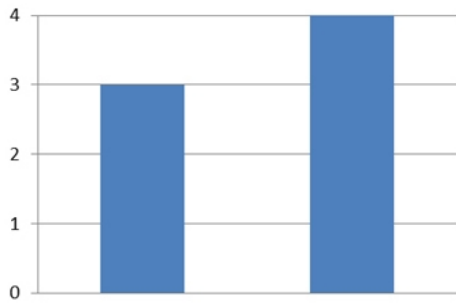
37) The amounts 3 and 4 are compared. Which of the following graphical displays are the least misleading?

37) _____

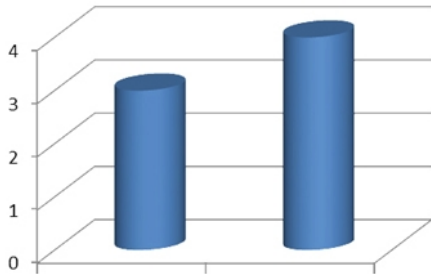
A)



B)



C)

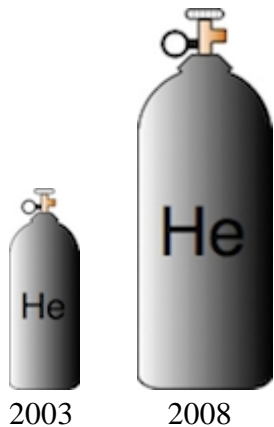


D)

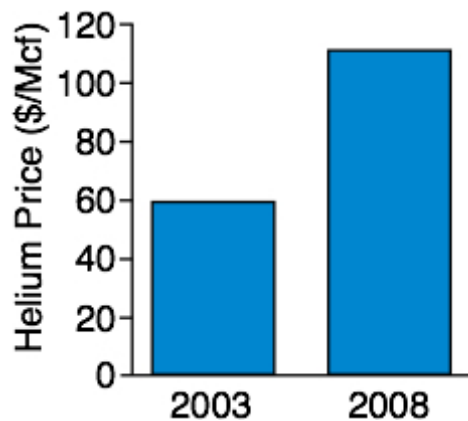


38) **Helium prices:** The cost of grade A Helium gas in 2003 was around \$60/Mcf. Five years later it reached around \$115/Mcf. Which of the following graphs accurately represents the magnitude of the increase? Which one exaggerates it? 38) _____

A)



B)



39) **Gravity on Mars:** The gravity on Earth is around $\frac{2}{3}$'s stronger than the gravity on Mars. 39) _____

Which of the following graphics compare the gravity differences more accurately, and wh

A)

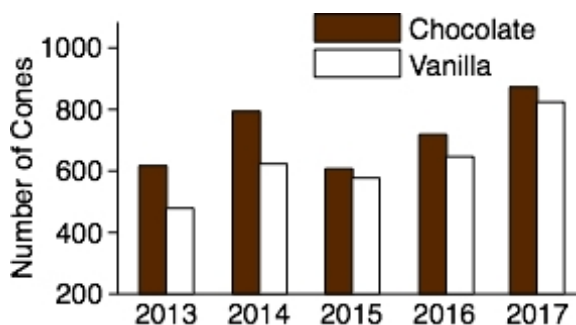


B)

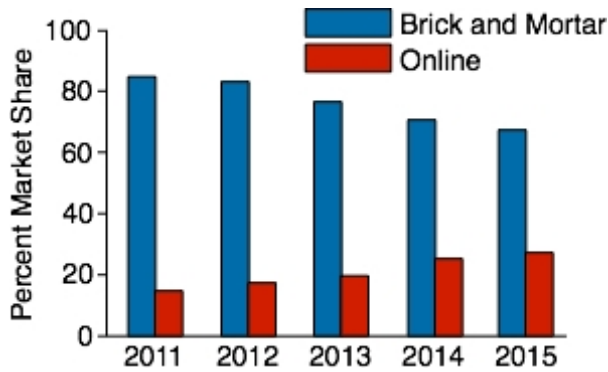


SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

40) **Chocolate or vanilla:** The following bar graph shows the number of chocolate and vanilla ice cream cones sold during the annual county fair for the years 2013 - 2017. Does the graph present an accurate picture of the difference between chocolate and vanilla cones sold? Or is it misleading? Explain. 40) _____



41) **Toy sales:** The following graph presents the percent market share for the US Toy Retail Sales between brick and mortar toy sales and online sales for the years 2011-2015. Does the graph present an accurate picture of the differences in revenue from these two sources? Or is it misleading? Explain. 41) _____



MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

42) Choose the answer below that best completes the following statement. 42) _____

A _____ is a number that describes a population.

- A) summary B) statistic C) sample D) parameter

43) Choose the answer below that best completes the following statement. 43) _____

A _____ is a number that describes a sample.

- A) population B) statistic C) measurement D) parameter

44) In a recent poll, 64% of the respondents supported stricter gun laws. Is this an example of statistic or a parameter? 44) _____

- A) Statistic B) Parameter

45) In a small town, 84% of the residents, aged 16 or more years old, own a car. Is this an example of statistic or a parameter? 45) _____

- A) Statistic B) Parameter

46) Of the televisions offered at an electronics store, 42% cost less than \$500.00. Is this an example of statistic or a parameter? 46) _____

- A) Statistic B) Parameter

47) In a survey of 1000 teenagers, 23% of them said they use tobacco products. Is this an example of statistic or a parameter? 47) _____

- A) Statistic B) Parameter

- 48) Which of the following sample types should you always regard as unreliable? 48) _____
 A) simple random samples B) voluntary response samples
 C) stratified samples D) cluster samples
- 49) A pollster randomly samples 145 Democrats, 154 Republicans and 19 Independents (all registered voters) in Metro City and asks each poll participant which mayoral candidate he or she prefers. Identify the kind of sample that the pollster is using. 49) _____
 A) stratified sample B) sample of convenience
 C) voluntary response sample D) cluster sample
- 50) A middle school student passes out leaflets to the adults at a school function. The leaflets ask the recipient to indicate whether they believe in anthropogenic global warming. The bottom of the leaflet indicates that the completed leaflet should be returned to the student. Identify the kind of sample that is being used. 50) _____
 A) sample of convenience B) systematic sample
 C) cluster sample D) stratified sample
- 51) By visiting homes door-to-door, a municipality surveys all the households in 149 randomly-selected neighborhoods to see how residents feel about a proposed property tax increase. Identify the type of sample that is being used. 51) _____
 A) systematic sample B) voluntary response sample
 C) stratified sample D) cluster sample
- 52) An electronics manufacturer test every 50th cell phone to verify that it is functioning properly. Identify the kind of sample that is being used. 52) _____
 A) simple random sample B) systematic sample
 C) cluster sample D) stratified sample
- 53) The names of all 126 students in a professor's class are written on identical slips of paper, and the slips are placed into a large glass jar. Then, the professor selects 14 random slips from the jar. Identify the kind of sample that is being used. 53) _____
 A) systematic sample B) simple random sample
 C) cluster sample D) sample of convenience
- 54) Determine which of the following describes quantitative data. 54) _____
 i). the name of a chemical sample
 ii). the mass of a chemical sample
 iii). the color of a chemical sample
 A) ii only B) i and ii only C) i, ii, and iii D) i only

- 55) Determine which of the following describes quantitative data. 55) _____
- i). the length of an object in feet
 - ii). the speed of an object in meters per second
 - iii). the number of objects that are blue
- A) i and ii only B) iii only C) i only D) i, ii, and iii
- 56) Determine which of the following describes qualitative data. 56) _____
- i). the volume of a shipping container, in gallons
 - ii). the name of the material from which the container is made
 - iii). the shape of the container
- A) i, ii, and iii B) i and iii only C) ii and iii only D) i and ii only
- 57) Determine which of the following describes qualitative data. 57) _____
- i). the make of the car with license plate number VNS-862
 - ii). the license plate number VNS-862
 - iii). the number of vehicles whose license plate number begins with "VNS"
- A) i and ii only B) iii only
C) neither i, nor ii, nor iii D) i only
- 58) Determine which of the following describes nominal data. 58) _____
- i. My favorite days of the week are Friday, Saturday, and Tuesday.
 - ii. My favorite day of the week is Friday, my second-favorite is Saturday, and third-favorite is Tuesday.
- A) both i and ii B) neither i nor ii C) i only D) ii only
- 59) Determine which of the following describes nominal data. 59) _____
- i. Michaelangelo's sells small, medium, large, and jumbo pizzas.
 - ii. Michaelangelo's most-requested toppings are pepperoni, black olives, and mushroom
- A) neither i nor ii B) both i and ii C) i only D) ii only
- 60) Determine which of the following describes ordinal data. 60) _____
- i. In the horse race, Betty's Girl won, Mr. Ed placed, and Wabash showed.
 - ii. In the horse race, I bet on Betty's Girl to win, Mr. Ed to place, and Wabash to show
- A) i only B) both i and ii C) neither i nor ii D) ii only
- 61) Determine which of the following describes ordinal data. 61) _____
- i. My best friends are Georgia, Amithaba, and Raphael.
 - ii. My favorite numbers are 2, 7 and 13.
- A) both i and ii B) neither i nor ii C) i only D) ii only

- 62) Which one of the following data are discrete? 62) _____
- A) the average preseason ranking of the University of Connecticut's women's basketball team over the past 10 years
 - B) the pre-season ranking of Duke University's men's basketball team
 - C) the height of the tallest player on Duke University's men's basketball team
 - D) the average height of players on the University of Connecticut's women's basketball team
- 63) Which one of the following data are discrete? 63) _____
- A) the speed of the boat's propeller, in revolutions per minute
 - B) the number of crew members on the boat
 - C) the latitude and longitude of the boat's port of departure
 - D) the latitude and longitude of a boat at sea
- 64) Which one of the following data are continuous? 64) _____
- A) the average height of a sample of trees
 - B) the rankings of the trees, from most numerous to least numerous
 - C) the number of representatives of each species in the park
 - D) the number of species of trees in a park
- 65) Which one of the following data are continuous? 65) _____
- A) the number of musicians performing in the MP3 file
 - B) the time remaining for an MP3 music download
 - C) the number of times the file has been downloaded
 - D) all of these represent continuous data
- 66) When rolling two six-sided dice, your total roll ranges from 2 (double ones) to 12 (double sixes). Characterize the nature of the roll total. 66) _____
- A) qualitative and discrete
 - B) qualitative and continuous
 - C) quantitative and continuous
 - D) quantitative and discrete
- 67) When experimental units are people, they are sometimes called _____. 67) _____
- A) personnel
 - B) subjects
 - C) topics
 - D) human units
- 68) In an experiment, the _____ is what is measured on each experimental unit. 68) _____
- A) subject
 - B) treatment
 - C) category
 - D) outcome
- 69) Which of the following is the best description of a randomized experiment? 69) _____
- A) an experiment in which the treatments are assigned randomly to experimental units
 - B) an experiment in which the investigators are chosen at random
 - C) an experiment in which the outcomes are random
 - D) an experiment in which the experimental units are selected at random

- 70) In a randomized experiment, if there are large differences in outcomes among the treatment groups, we can conclude that the differences are due to _____ 70) _____
- A) deliberate data manipulation B) the treatments
C) experimental error D) random luck
- 71) Which of the following is the best description of a double-blind experiment? 71) _____
- A) an experiment in which neither the investigators nor the subjects know the others' names
B) an experiment in which both the investigators and the subjects are hidden from the others' views
C) an experiment in which neither the investigators nor the subjects know how the treatments have been assigned
D) an experiment in which the subjects are blindfolded so they cannot see which treatment is applied to them
- 72) In an experiment, subjects are put into two categories according to sex, and then each subject is randomly assigned a treatment . This is an example of... 72) _____
- A) randomized blocking B) observational studies
C) gender bias D) confounding
- 73) A(n) _____ makes it difficult to determine whether an experimental outcome is due to the applied treatment. 73) _____
- A) perplexer B) uncooperative subject
C) error D) confounder
- 74) An experiment that tends to overestimate or underestimate the true value is said to be _____ 74) _____
- A) un-randomized B) biased
C) flagrant D) randomized
- 75) People are reluctant to admit to behavior that may reflect negatively on them. This can lead to ... 75) _____
- A) sampling bias B) voluntary response bias
C) social acceptability bias D) hurt feelings
- 76) The question... 76) _____
- "Do you favor a higher standard of living, even though it produces unclean air and wa
... is an example of ...
- A) sampling bias B) random sampling
C) leading question bias D) framing

77) You ask your friends who they plan to vote for in the next congressional election. Based on their responses, you conclude that the candidate you favor cannot lose! 77) _____

This is most likely an example of ...

- A) sampling bias
- B) self-interest bias
- C) voluntary response bias
- D) randomized sampling

78) A small brew pub sent out questionnaires to a simple random sample of 250 customers asking whether they would like the brewery to include an imperial stout in their regular offerings. Of the 250 questionnaires, 12 were returned and 10 of those were in favor of including the stout. Specify the type of bias involved. 78) _____

- A) Voluntary response
- B) Self-interest
- C) Sampling
- D) Nonresponse

79) A sign in a grocery store claims that 92% of their customers believe them to have the freshest produce in the city. Specify the type of bias involved. 79) _____

- A) Leading question
- B) Self-interest
- C) Voluntary response
- D) Social acceptability

80) A radio talk show invites people to call in and state whether or not they think that sexual harassment in the work place is a common problem. 80) _____

- A) Social acceptability
- B) Sampling
- C) Voluntary response
- D) Self-interest

Answer Key

Testname: UNTITLED1

- 1) D
- 2) A
- 3) A
- 4) D
- 5) D
- 6) C
- 7) B
- 8) D
- 9) D
- 10) B
- 11) C
- 12) A
- 13) C
- 14) A
- 15) D
- 16) A
- 17) C
- 18) A
- 19) C
- 20) D
- 21) C
- 22) A
- 23) B
- 24) C
- 25) D
- 26) C
- 27) D
- 28) D
- 29) A
- 30) D
- 31) A
- 32) D
- 33) D
- 34) B
- 35) D
- 36) A
- 37) B
- 38) B
- 39) A
- 40) Misleading
- 41) Accurate
- 42) D
- 43) B
- 44) A
- 45) B
- 46) B
- 47) A
- 48) B
- 49) A

Answer Key

Testname: UNTITLED1

- 50) A
- 51) D
- 52) B
- 53) B
- 54) A
- 55) D
- 56) C
- 57) A
- 58) C
- 59) D
- 60) B
- 61) B
- 62) B
- 63) B
- 64) A
- 65) B
- 66) D
- 67) B
- 68) D
- 69) A
- 70) B
- 71) C
- 72) A
- 73) D
- 74) B
- 75) C
- 76) C
- 77) A
- 78) D
- 79) B
- 80) C