**Business Statistics 2nd Edition Donatelle Test Bank**
Full Download: http://alibabadownload.com/product/business-statistics-2nd-edition-donatelle-test-bank/

Exam

Name_____

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

1) Consider the following frequency distribution. 1) _____

| Number of Customers | Frequency |
|---|---|
| 0-2 | 10 |
| 3-5 | 7 |
| 6-10 | 12 |
| 11-15 | 5 |

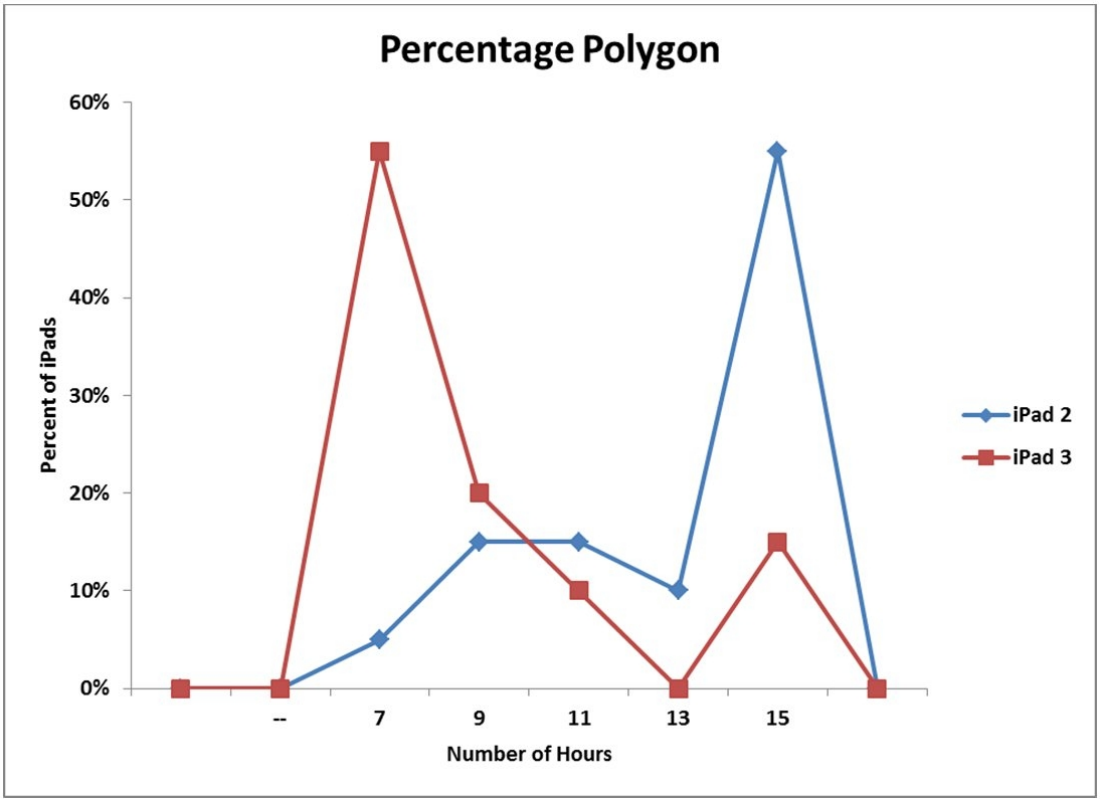
Which rule for constructing a frequency distribution using grouped quantitative data has been violated?

A) Use mutually exclusive classes.
B) Use equal-size classes.
C) Avoid empty classes.
D) No rule has been violated.

Answer: B

Explanation: A)
B)
C)
D)

2) The following graph is a percent polygon showing the battery life, in hours, for a sample of iPad 2s and iPad 3s. The diamond markers represent the iPad 2 battery life while the square markers represent the iPad 3 battery life. Based on this graph, which of the following statements is true? 2) _____




A) The battery life of the iPad 2 tends to be longer than the battery life of the iPad 3.



**This sample only, Download all chapters at: alibabadownload.com**

B) The battery life of the iPad 3 tends to be longer than the battery life of the iPad 2.
C) The battery life of the iPad 3 tends to be about the same as the battery life of the iPad 2.
D) The difference in battery life between the iPad 2 and iPad 3 cannot be detected with this graph.

Answer: A
Explanation: A)
B)
C)
D)

3) Consider the following frequency distribution. 3) _____

| Number of Minutes | Frequency |
|---|---|
| 0 to less than 5 | 6 |
| 5 to less than 10 | 9 |
| 8 to less than 13 | 14 |
| 13 to less than 18 | 2 |

Which rule for constructing a frequency distribution using grouped quantitative data has been violated?
A) Avoid empty classes.
B) Use mutually exclusive classes.
C) Use equal-size classes.
D) No rule has been violated.

Answer: B
Explanation: A)
B)
C)
D)

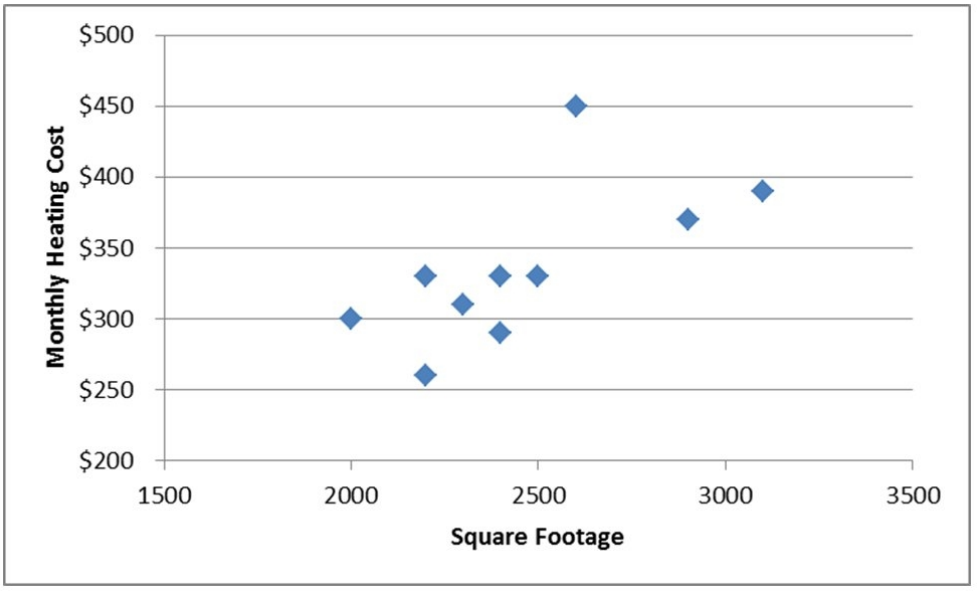
4) The following frequency distribution displays the daily sales of muffins at Avalon Bakery. 4) _____

| Number Sold | Frequency |
|---|---|
| 1-7 | 5 |
| 8-14 | 8 |
| 15-21 | 13 |
| 22-28 | 21 |
| 27-35 | 3 |

How many weeks of data are included in this frequency distribution?
A) 50
B) 75
C) 100
D) 25

Answer: A
Explanation: A)
B)
C)
D)

5) The following graph shows the square footage of 10 homes along with their corresponding heating cost for the most recent month. 5) _____



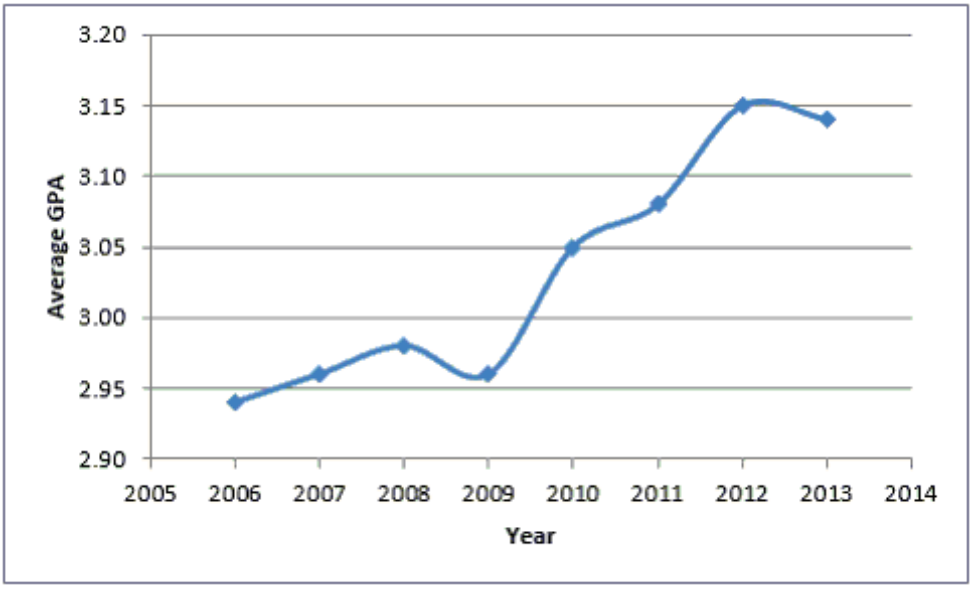

Which one of the following statements is not correct?

A) Monthly heating cost is the dependent variable in the graph.
B) Square footage is the independent variable in the graph.
C) As the square footage of the home increases, the monthly heating cost tends to decrease.
D) As the square footage of the home increases, the monthly heating cost tends to increase.

Answer: C

Explanation: A)
B)
C)
D)

6) The following graph shows the average grade point average for a particular college from 2006 until 2013. 6) _____




This graph is an example of a _____.

A) vertical bar chart
B) histogram
C) Pareto chart
D) line chart

Answer: D

Explanation: A)
B)
C)
D)

7) The following distribution shows the frequency of daily revenue for an Italian restaurant in Wilmington, Delaware. 7) _____

| Revenue | Frequency |
|---|---|
| Under $2,000 | 18 |
| $2,000 to under $4,000 | 10 |
| $4,000 to under $6,000 | 26 |
| $6,000 to under $8,000 | 14 |
| $8,000 to under $10,000 | 8 |
| Over $10,000 | 4 |

What is the probability that a randomly selected day will generate more than $6,000 in revenue?

A) 0.650
B) 0.900
C) 0.325
D) 0.775

Answer: C

Explanation: A)
B)
C)
D)

8) _____ display the proportion of observations of each class relative to the total number of observations. 8) _____

A) Cumulative relative frequency distributions
B) Frequency distributions
C) Histograms
D) Relative frequency distributions

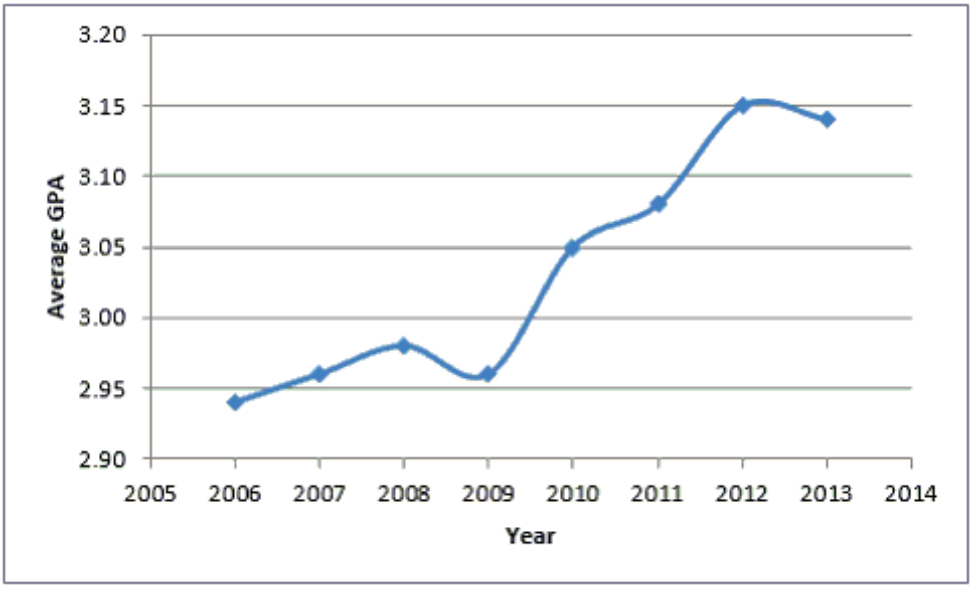
Answer: D
Explanation: A)
B)
C)
D)

9) A stem and leaf display most resembles a _____. 9) _____

A) histogram
B) pie chart
C) relative frequency distribution
D) contingency table

Answer: A
Explanation: A)
B)
C)
D)

10) The following graph shows the average grade point average for a particular college from 2006 until 2013. 10) _____




Which one of the following statements is correct?

A) Average GPA is the dependent variable in the graph.
B) Historically, the Average GPA of the college tends to decrease.
C) There appears to be no relationship between Year and Average GPA.
D) Year is the dependent variable in the graph.

Answer: A

Explanation: A)
B)
C)
D)

11) The following frequency distribution displays the daily sales of muffins at Avalon Bakery. 11) _____

| Number Sold | Frequency |
|---|---|
| 1-7 | 5 |
| 8-14 | 8 |
| 15-21 | 13 |
| 22-28 | 21 |
| 27-35 | 3 |

What is the probability that between 15 to 21 muffins will be sold tomorrow?

A) 0.44 B) 0.26 C) 0.50 D) 0.36

Answer: B

Explanation: A)
B)
C)
D)

12) _____ charts are a specific type of bar chart used in quality control programs by businesses to graphically display the causes of problems. 12) _____

A) Stacked bar B) Pareto C) Clustered bar D) Pie

Answer: B

Explanation: A)
B)
C)
D)

13) A(n) _____ is a category in a frequency distribution. 13) _____

A) histogram B) class C) ogive D) polygon

Answer: B

Explanation: A)
B)
C)
D)

14) The following table shows the percentage of U.S. energy consumption according to sources in 2009. 14) _____

| Source | Percentage |
|---|---|
| Petroleum | 37% |
| Natural Gas | 25% |
| Coal | 21% |
| Nuclear | 9% |
| All renewable | 8% |

Which of the following best displays this data?

A) pie chart B) histogram
C) horizontal bar chart D) vertical bar chart

Answer: A

Explanation: A)
B)
C)
D)

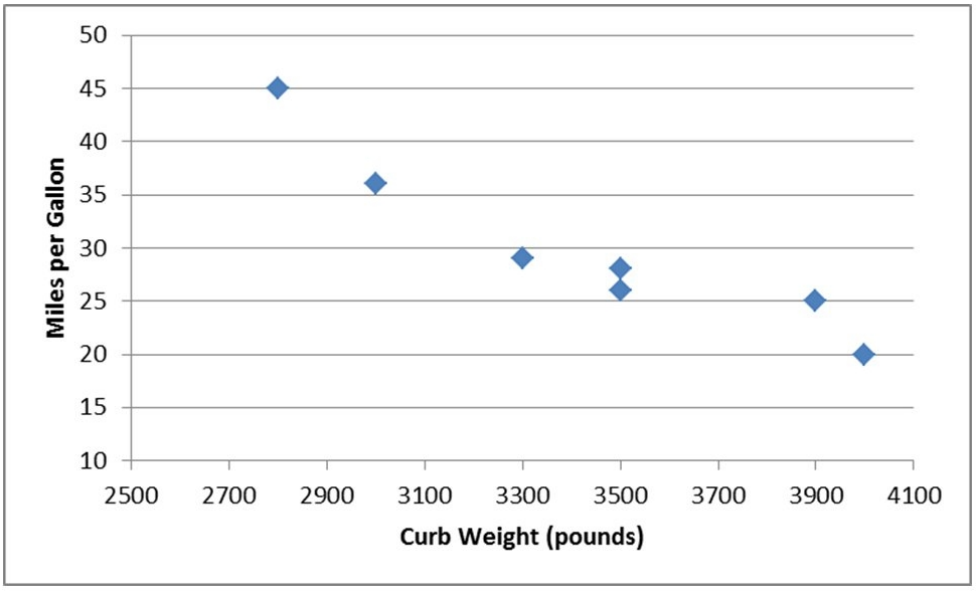
15) The _____ graphs the midpoint of each class as a line rather than a column. 15) _____

A) bar chart B) scatter plot
C) histogram D) percentage polygon

Answer: D

Explanation: A)
B)
C)
D)

16) The following graph shows the curb weight of seven cars, in pounds, along with their corresponding highway miles per gallon. 16) _____




Which one of the following statements is correct?

A) Miles per gallon is the independent variable in the graph.
B) As the curb weight increases, the highway miles per gallon tend to increase.
C) Curb weight is the dependent variable in the graph.
D) As the curb weight increases, the highway miles per gallon tend to decrease.

Answer: D

Explanation: A)
B)
C)
D)

17) Class _____ are the number of observations for each class of a frequency distribution using grouped quantitative data. 17) _____

A) widths
B) numbers
C) frequencies
D) boundaries

Answer: C

Explanation: A)
B)
C)
D)

18) When you want to compare the shape of two or more distributions on one graph, a _____ is your best choice 18) _____

A) frequency distribution
B) percentage polygon
C) relative frequency distribution
D) histogram

Answer: B

Explanation: A)
B)
C)
D)

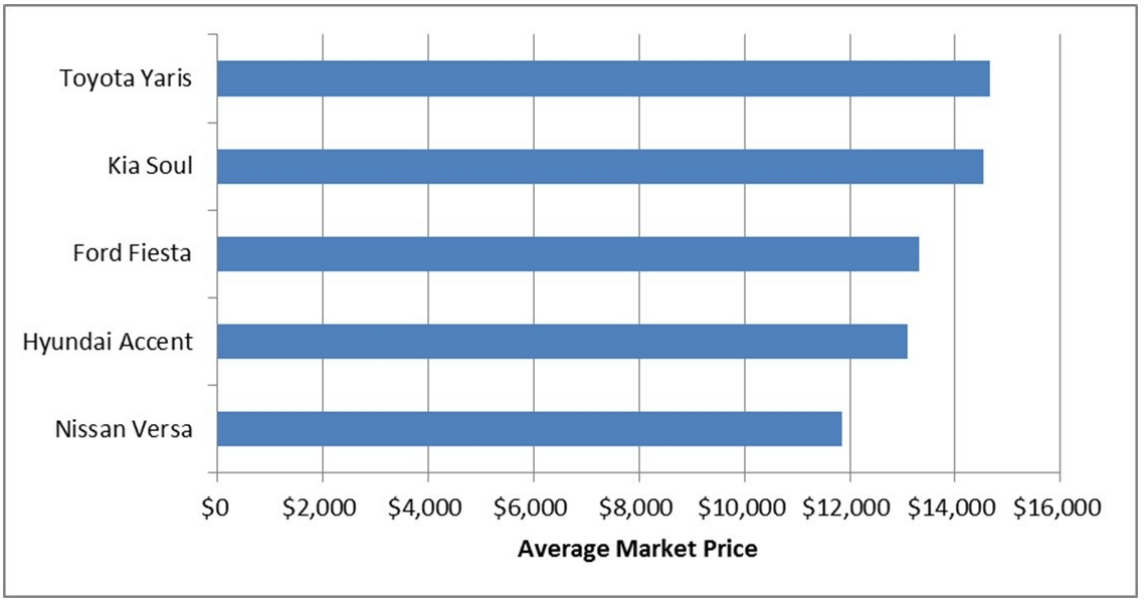
19) A data set has 60 observations with a minimum value equal to 30 and a maximum value equal to 72. The estimated class width using the $2^k \geq n$ rule to determine the number of classes is 19) _____

A) 9. B) 12. C) 10. D) 7.

Answer: D

Explanation: A)
B)
C)
D)

20) The following chart shows the average market price for five brands of cars in March 2013. 20) _____




Which of the following statements is not correct?

A) The Nissan Versa has the lowest average market value.
B) The Hyundai Accent has a lower average market price than the Nissan Versa.
C) The Hyundai Accent has a lower average market price than the Toyota Yaris.
D) The Kia Soul has a higher average market price than the Ford Fiesta.

Answer: B

Explanation: A)
B)
C)
D)

21) The following distribution shows the frequency of daily revenue for an Italian restaurant in Wilmington, Delaware. 21) _____

| Revenue | Frequency |
|---|---|
| Under $2,000 | 18 |
| $2,000 to under $4,000 | 10 |
| $4,000 to under $6,000 | 26 |
| $6,000 to under $8,000 | 14 |
| $8,000 to under $10,000 | 8 |
| Over $10,000 | 4 |

How many business days does this frequency distribution represent?

A) 18 B) 80 C) 32 D) 100

Answer: B

Explanation: A)
B)
C)
D)

22) The following frequency distribution displays the daily sales of muffins at Avalon Bakery. 22) _____

| Number Sold | Frequency |
|---|---|
| 1-7 | 5 |
| 8-14 | 8 |
| 15-21 | 13 |
| 22-28 | 21 |
| 27-35 | 3 |

What is the probability that 21 or fewer muffins will be sold tomorrow?

A) 0.92 B) 0.52 C) 0.80 D) 0.66

Answer: A

Explanation: A)
B)
C)
D)

23) Porter Automotive is a car dealership that sells Buicks and Hondas. The following data shows the number of buyers this month according to the brand of car they purchased as well as their age group. 23) _____

| Age | Buick | Honda |
|---|---|---|
| Under 40 years old | 6 | 17 |
| 40 years or older | 19 | 8 |

The percentage of buyers who are under 40 old in this data is _____.

A) 54% B) 50% C) 46% D) 20%

Answer: C

Explanation: A)
B)
C)
D)

24) Consider the following stem and leaf display. 24) _____

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

Which of the following statements is correct?
A) This largest data value is 59.
B) The class 50-59 contains the most values.
C) There are a total of 10 data values in this data set.
D) The data value that occurs most often is 50.

Answer: B
Explanation: A)
B)
C)
D)

25) _____ group several values in a single column within the same category in a vertical direction. 25) _____
A) Pie charts
B) Clustered bar charts
C) Scatter plots
D) Stacked bar charts

Answer: D
Explanation: A)
B)
C)
D)

26) _____ data are values based on observations that can be counted and are typically represented by whole numbers. 26) _____
A) Continuous
B) Nominal
C) Discrete
D) Time series

Answer: C
Explanation: A)
B)
C)
D)

27) The following distribution shows the frequency of daily revenue for an Italian restaurant in Wilmington, Delaware. 27) _____

| Revenue | Frequency |
|---|---|
| Under $2,000 | 18 |
| $2,000 to under $4,000 | 10 |
| $4,000 to under $6,000 | 26 |
| $6,000 to under $8,000 | 14 |
| $8,000 to under $10,000 | 8 |
| Over $10,000 | 4 |

What is the probability that a randomly selected day will generate under $2,000 in revenue?

A) 0.500 B) 0.050 C) 0.225 D) 0.160

Answer: C

Explanation: A)
B)
C)
D)

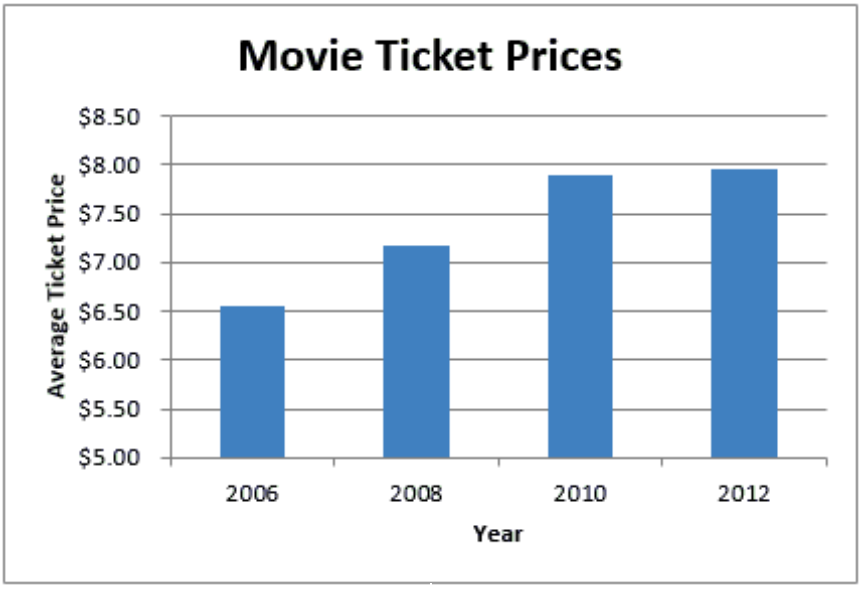
28) The class _____ is the breadth, or range, of numbers we plan to put into each class of a frequency distribution using grouped quantitative data. 28) _____

A) frequency B) width C) number D) boundary

Answer: B

Explanation: A)
B)
C)
D)

29) The following chart shows the average movie ticket price according to a survey by the National Association of Theater Owners. 29) _____




Which of the following statements is not correct?

A) The highest average ticket price occurred in 2012.
B) The average ticket price in 2010 was higher than the average ticket price in 2008.
C) The average ticket price has decreased over time.
D) The lowest average ticket price occurred in 2006.

Answer: C

Explanation: A)
B)
C)
D)

30) The following chart shows the average market price for five brands of cars in March 2013. 30) _____

This chart is an example of a _____ bar chart.

A) vertical B) clustered C) horizontal D) stacked

Answer: C

Explanation: A)
B)
C)
D)

31) In Excel, contingency tables are known as _____. 31) _____

A) pivot tables B) frequency distributions
C) bar charts D) bins

Answer: A

Explanation: A)
B)
C)
D)

32) The following distribution shows the frequency of daily revenue for an Italian restaurant in Wilmington, Delaware. 32) _____

| Revenue | Frequency |
|---|---|
| Under $2,000 | 18 |
| $2,000 to under $4,000 | 10 |
| $4,000 to under $6,000 | 26 |
| $6,000 to under $8,000 | 14 |
| $8,000 to under $10,000 | 8 |
| Over $10,000 | 4 |

What is the probability that a randomly selected day will generate between $2,000 and under $4,000 in revenue?

A) 0.325 B) 0.500 C) 0.100 D) 0.125

Answer: D

Explanation: A)
B)
C)
D)

33) A _____ chart is a special type of scatter plot in which the data points in the scatter plot are connected with a line. 33) _____

A) pie B) Pareto C) bar D) line

Answer: D

Explanation: A)
B)
C)
D)

34) _____ totals the proportion of observations that are less than or equal to the class at which you are looking. 34) _____

A) Histograms
B) Relative frequency distributions
C) Cumulative relative frequency distributions
D) Frequency distributions

Answer: C

Explanation: A)
B)
C)
D)

35) Porter Automotive is a car dealership that sells Buicks and Hondas. The following data shows the number of buyers this month according to the brand of car they purchased as well as their age group. 35) _____

| Age | Buick | Honda |
|---|---|---|
| Under 40 years old | 6 | 17 |
| 40 years or older | 19 | 8 |

Which one of the following statements is true based on the data?

A) There are fewer Buick owners than Honda owners in this data.
B) Honda owners tend to be older than Buick owners.
C) Buick owners tend to be older than Honda owners.
D) There are more Buick owners than Honda owners in this data.

Answer: C
Explanation: A)
B)
C)
D)

36) Consider the following stem and leaf display. 36) _____

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

Which data value occurs most often?

A) 31 B) 1 C) 5 D) 59

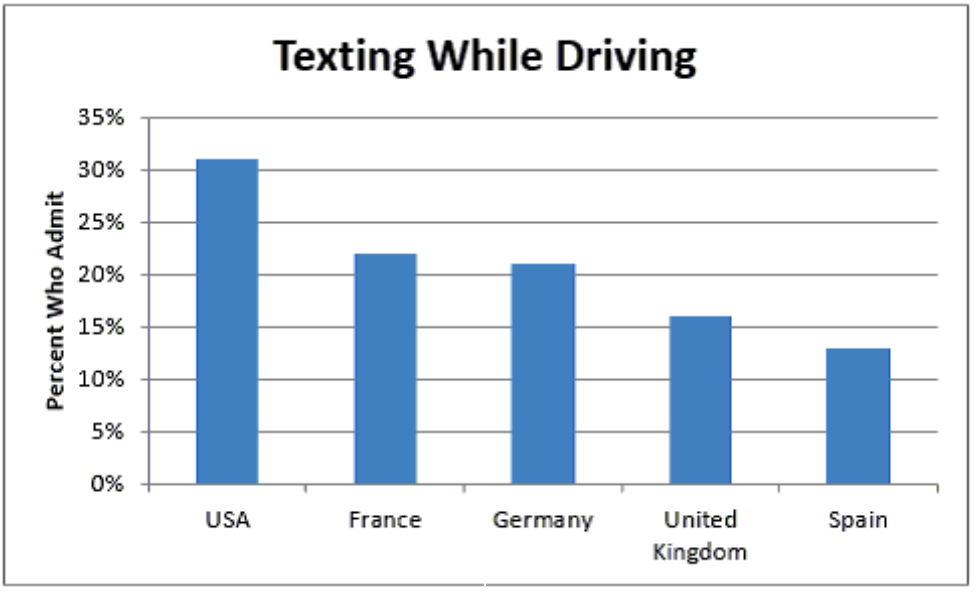
Answer: A
Explanation: A)
B)
C)
D)

37) _____ provide a picture of the relationship between two data points that are paired together. 37) _____

A) Histograms B) Scatter plots C) Pareto charts D) Pie charts

Answer: B
Explanation: A)
B)
C)
D)

38) The following chart shows the percentage of adults from various countries who admitted to texting while driving in a recent survey. 38) _____



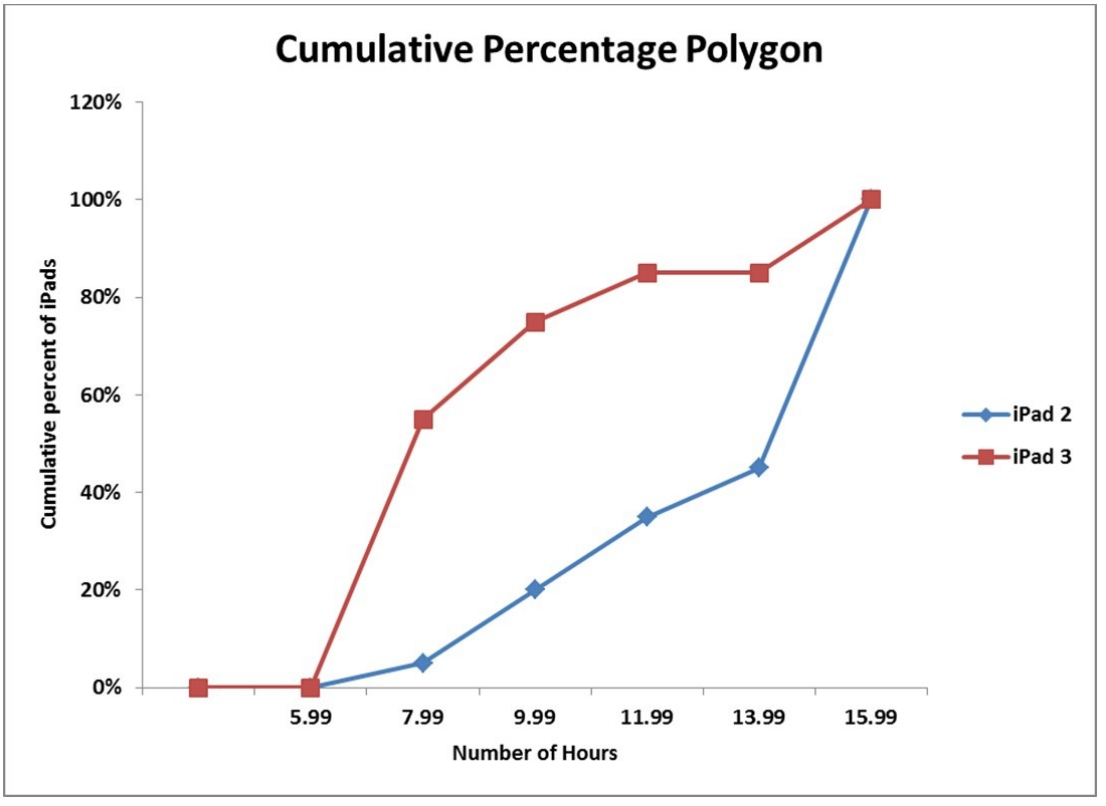

This chart is an example of a _____ bar chart.

A) horizontal B) stacked C) vertical D) clustered

Answer: C

Explanation: A)
B)
C)
D)

39) The following graph is a cumulative percent polygon showing the battery life, in hours, for a sample of iPad 2s and iPad 3s. The diamond markers represent the iPad 2 battery life while the square markers represent the iPad 3 battery life. Based on this graph, which of the following statements is true? 39) _____

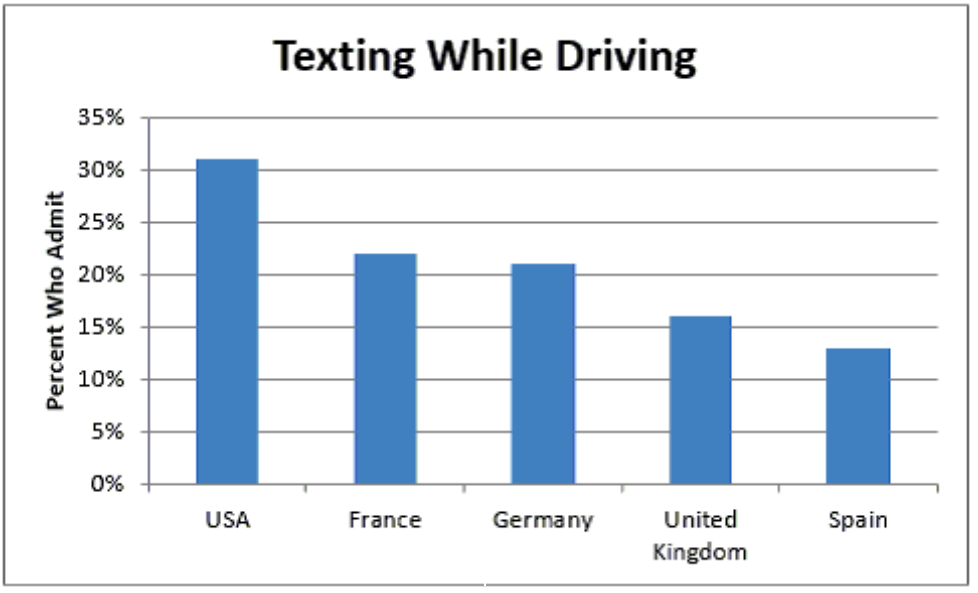



A) Approximately 20% of the iPad 2 batteries lasted less than 10 hours.
B) Approximately 20% of the iPad 2 batteries lasted more than 10 hours.
C) Approximately 60% of the iPad 3 batteries lasted more than 8 hours.
D) Approximately 80% of the iPad 3 batteries lasted less than 8 hours.

Answer: A

Explanation: A)
B)
C)
D)

40) The following chart shows the percentage of adults from various countries who admitted to texting while driving in a recent survey. 40) _____




Which of the following statements is not correct?

A) The United Kingdom has a higher percentage of adults who admit to texting while driving when compared to Germany.

B) The United Kingdom has a lower percentage of adults who admit to texting while driving when compared to France.

C) The USA has the highest percentage of adults who admitted to texting while driving.

D) Spain has the lowest percentage of adults who admitted to texting while driving.

Answer: A

Explanation: A)
B)
C)
D)

41) The following frequency distribution displays the daily sales of muffins at Avalon Bakery. 41) _____

| Number Sold | Frequency |
|---|---|
| 1-7 | 5 |
| 8-14 | 8 |
| 15-21 | 13 |
| 22-28 | 21 |
| 27-35 | 3 |

What is the probability that between 20 and 35 muffins will be sold tomorrow?

A) 0.66 B) 0.14 C) 0.58 D) 0.48

Answer: D

Explanation: A)
B)
C)
D)

42) Porter Automotive is a car dealership that sells Buicks and Hondas. The following data shows the number of buyers this month according to the brand of car they purchased as well as their age group. 42) _____

| Age | Buick | Honda |
|---|---|---|
| Under 40 years old | 6 | 17 |
| 40 years or older | 19 | 8 |

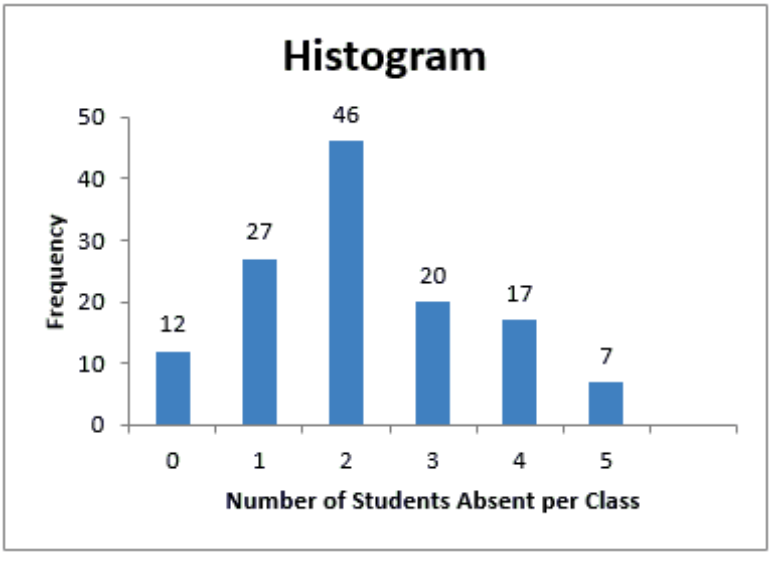
The percentage of buyers 40 years or older who purchased a Honda is _____.

A) 34% B) 16% C) 38% D) 12%

Answer: B

Explanation: A)
B)
C)
D)

43) A statistics professor kept attendance records and recorded the number of absent students per class. This data is displayed in the following histogram with the frequency of each number of absent students shown above the bars. 43) _____




How many statistics classes had two or fewer students absent?

A) 9 B) 85 C) 42 D) 40

Answer: B

Explanation: A)
B)
C)
D)

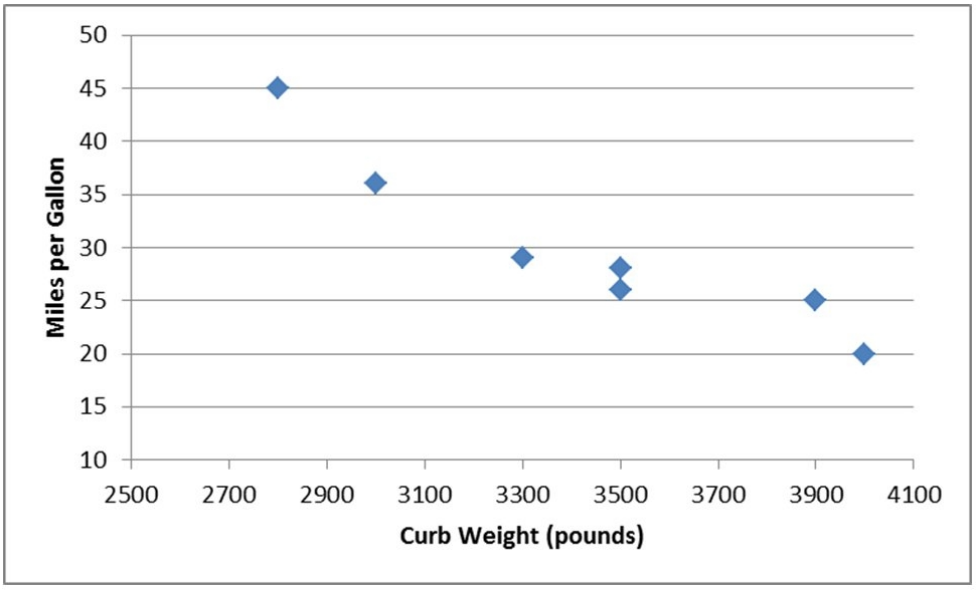
44) Which of the following is not a rule for constructing a frequency distribution using grouped quantitative data? 44) _____

A) Avoid empty classes.
B) Avoid close-ended classes.
C) Use equal-size classes.
D) Use mutually exclusive classes.

Answer: B

Explanation: A)
B)
C)
D)

45) The following graph shows the curb weight of seven cars, in pounds, along with their corresponding highway miles per gallon. 45) _____



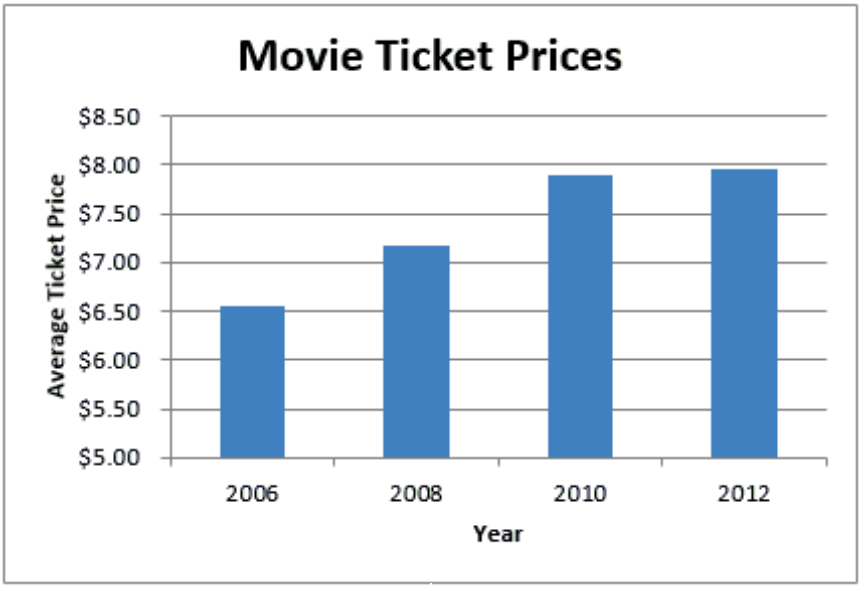

This graph is an example of a _____.

A) Pareto chart
B) scatter plot
C) line chart
D) histogram

Answer: B

Explanation: A)
B)
C)
D)

46) The following chart shows the average movie ticket price according to a survey by the National Association of Theater Owners. 46) _____



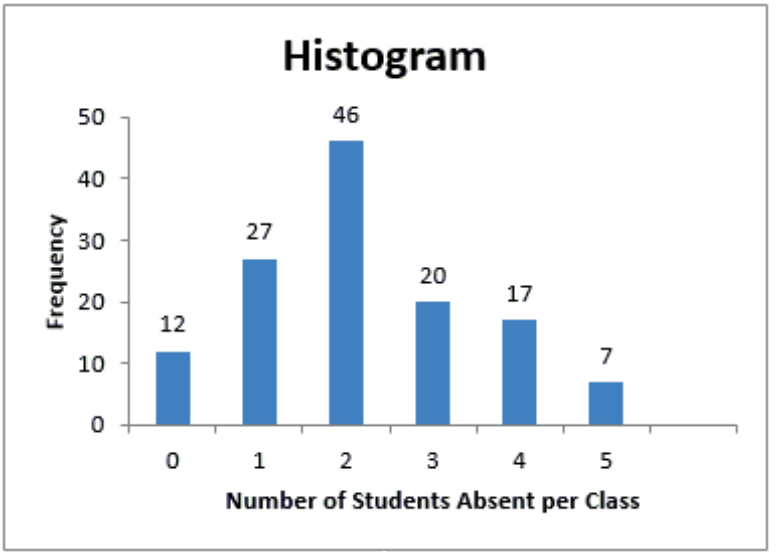

This chart is an example of a _____ chart.

A) Pareto B) vertical bar C) stacked bar D) horizontal bar

Answer: B

Explanation: A)
B)
C)
D)

47) A statistics professor kept attendance records and recorded the number of absent students per class. This data is displayed in the following histogram with the frequency of each number of absent students shown above the bars. 47) _____




How many total classes do these data represent?

A) 150 B) 100 C) 46 D) 129

Answer: D

Explanation: A)
B)
C)
D)

48) The class _____ represent the minimum and maximum values for each class of a frequency distribution using grouped quantitative data. 48) _____

A) numbers B) boundaries C) frequencies D) widths

Answer: B

Explanation: A)
B)
C)
D)

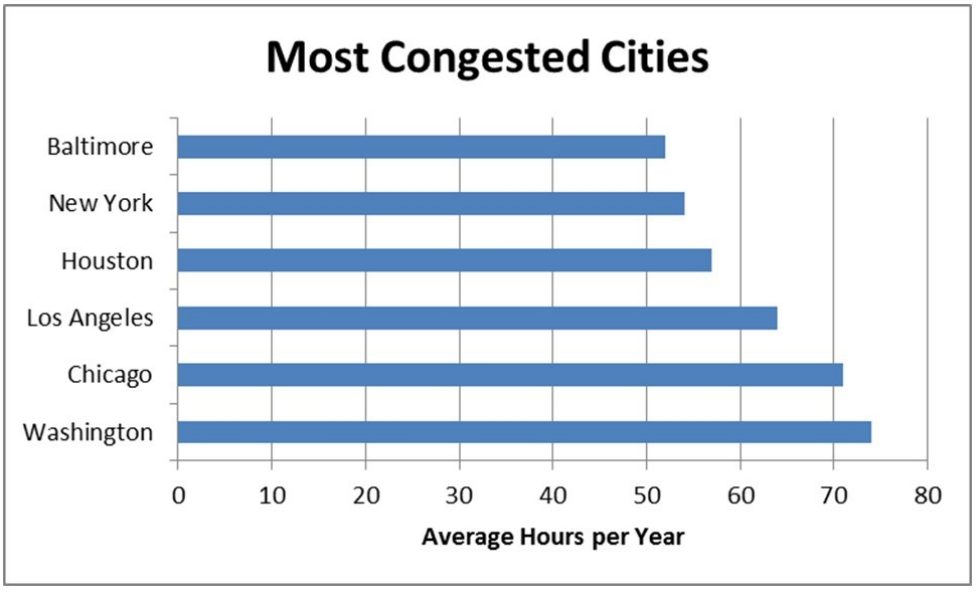
49) A data set has 60 observations with a minimum value equal to 30 and a maximum value equal to 72. The number of classes using the $2^k \geq n$ rule is 49) _____

A) 6. B) 7. C) 8. D) 5.

Answer: A

Explanation: A)
B)
C)
D)

50) The following chart shows the average number of hours commuters spend in traffic delays per year at the six most congested cities in the U.S. 50) _____




Which of the following statements is not correct?

A) Houston commuters have a higher average number of hours spent per year in traffic delays when compared to New York commuters.

B) Chicago commuters have the highest average number of hours spent per year in traffic delays.

C) Baltimore commuters have the lowest average number of hours spent per year in traffic delays.

D) Los Angeles commuters have a lower average number of hours spent per year in traffic delays when compared to Washington commuters.

Answer: B

Explanation: A)

B)

C)

D)

51) Porter Automotive is a car dealership that sells Buicks and Hondas. The following data shows the number of buyers this month according to the brand of car they purchased as well as their age group. 51) _____

| Age | Buick | Honda |
|---|---|---|
| Under 40 years old | 6 | 17 |
| 40 years or older | 19 | 8 |

This data is an example of a _____.

A) contingency table
B) stem and leaf diagram
C) histogram
D) relative frequency distribution

Answer: A

Explanation: A)
B)
C)
D)

52) Consider the following frequency distribution. 52) _____

| Number of Minutes | Frequency |
|---|---|
| 0 to less than 5 | 3 |
| 5 to less than 10 | 11 |
| 10 to less than 15 | 10 |
| 15 to less than 20 | 7 |

Which rule for constructing a frequency distribution using grouped quantitative data has been violated?

A) Avoid empty classes.
B) Use mutually exclusive classes.
C) Use equal-size classes.
D) No rule has been violated.

Answer: D

Explanation: A)
B)
C)
D)

53) The _____ is a line graph that plots the cumulative relative frequency distribution. 53) _____

A) scatter plot
B) percentage polygon
C) ogive
D) histogram

Answer: C

Explanation: A)
B)
C)
D)

54) The following distribution shows the frequency of daily revenue for an Italian restaurant in Wilmington, Delaware. 54) _____

| Revenue | Frequency |
|---|---|
| Under $2,000 | 18 |
| $2,000 to under $4,000 | 10 |
| $4,000 to under $6,000 | 26 |
| $6,000 to under $8,000 | 14 |
| $8,000 to under $10,000 | 8 |
| Over $10,000 | 4 |

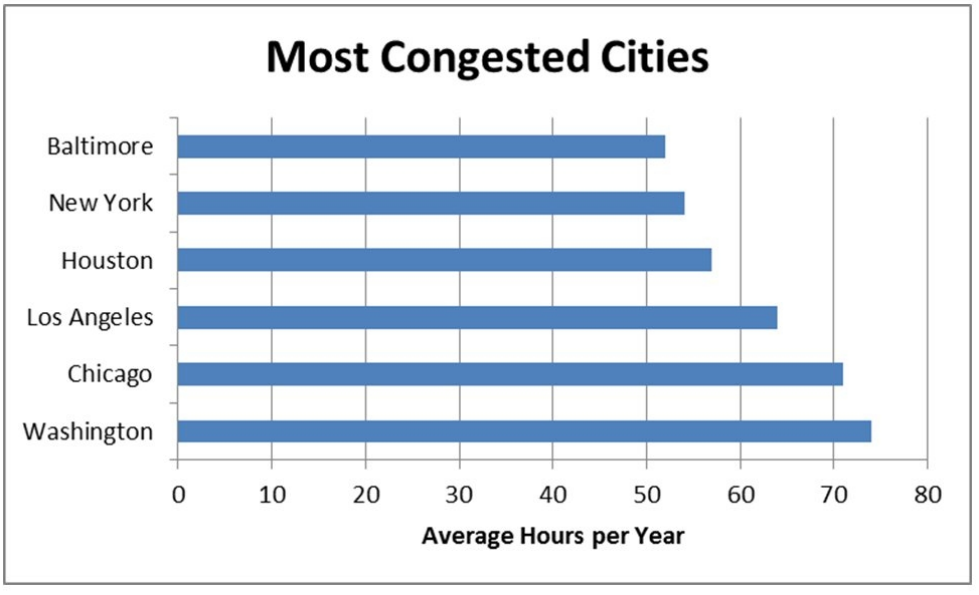
What is the width of each class for this distribution?

A) $8,000 B) $5,000 C) $2,000 D) $10,000

Answer: C

Explanation: A)
B)
C)
D)

55) The following chart shows the average number of hours commuters spend in traffic delays per year at the six most congested cities in the U.S. 55) _____




This chart is an example of a

A) vertical bar chart. B) horizontal bar chart.
C) Pareto chart. D) stacked bar chart.

Answer: B

Explanation: A)
B)
C)
D)

56) A _____ is a graph showing the number of observations in each class of a frequency distribution. 56) _____

A) relative frequency distribution
B) polygon
C) histogram
D) frequency distribution

Answer: C

Explanation: A)
B)
C)
D)

57) Bins in Excel represent the 57) _____

A) upper boundary of each class in a frequency distribution.
B) width of each class in a frequency distribution.
C) number of classes in a frequency distribution.
D) lower boundary of each class in a frequency distribution.

Answer: A

Explanation: A)
B)
C)
D)

58) The following graph shows the average price of LCD TVs from 2005 until 2012. 58) _____

This graph is an example of a _____.

A) histogram
B) vertical bar chart
C) line chart
D) Pareto chart

Answer: C

Explanation: A)
B)
C)
D)

59) A _____ is a table that shows the number of data observations that fall into specific intervals. 59) _____

A) histogram
B) percent polygon
C) frequency distribution
D) Pareto chart

Answer: C

Explanation: A)
B)
C)
D)

60) The following frequency distribution displays the daily sales of muffins at Avalon Bakery. 60) _____

| Number Sold | Frequency |
|---|---|
| 1-7 | 5 |
| 8-14 | 8 |
| 15-21 | 13 |
| 22-28 | 21 |
| 27-35 | 3 |

What is the width of each class in this distribution?

A) 10
B) 7
C) 1
D) 35

Answer: B

Explanation: A)
B)
C)
D)

61) The following graph shows the average price of LCD TVs from 2005 until 2012. 61) _____

Which one of the following statements is correct?

A) Historically, the average price of LCD TVs tends to decrease.
B) Year is the dependent variable in the graph.
C) Historically, the average price of LCD TVs tends to increase.
D) Average Price is the independent variable in the graph.

Answer: A

Explanation: A)
B)
C)
D)

62) _____ provide a format to display observations that have more than one value associated with them. 62) _____

A) Histograms
B) Contingency tables
C) Pie charts
D) Frequency distributions

Answer: B

Explanation: A)
B)
C)
D)

63) The following table shows the percentage of e-mails that are sent each day of the business week according to an Intermedia survey. 63) _____

| Day | Percentage |
|---|---|
| Monday | 15% |
| Tuesday | 23% |
| Wednesday | 22% |
| Thursday | 21% |
| Friday | 19% |

Which of the following best displays this data?

A) histogram
B) pie chart
C) vertical bar chart
D) horizontal bar chart

Answer: B

Explanation: A)
B)
C)
D)

64) _____ group several values side by side within the same category in a vertical direction. 64) _____

A) Pie charts
B) Stacked bar charts
C) Clustered bar charts
D) Scatter plots

Answer: C

Explanation: A)
B)
C)
D)

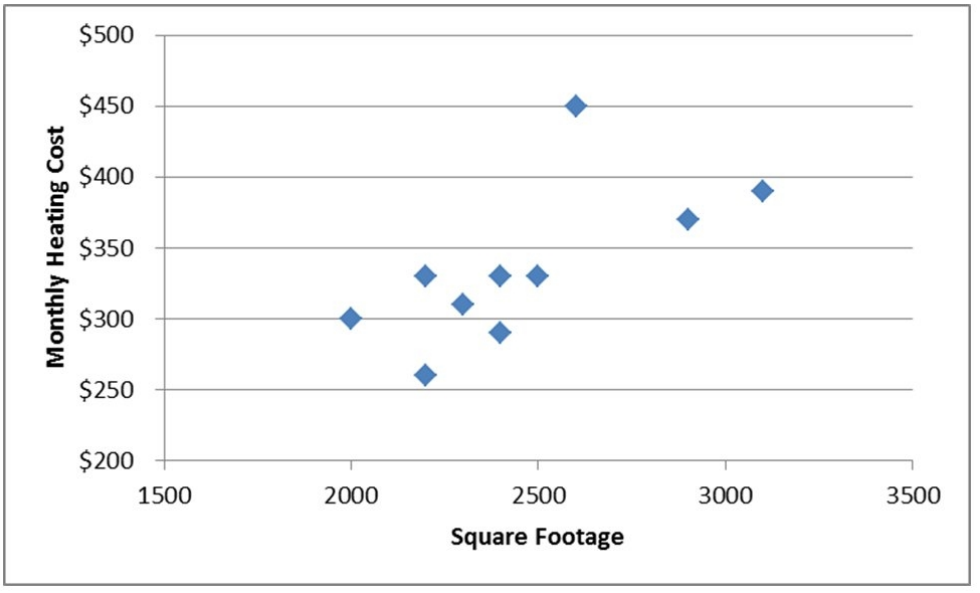
65) _____ classes are classes with boundaries that do not overlap. 65) _____

A) Equal-size
B) Open-ended
C) Close-ended
D) Mutually exclusive

Answer: D

Explanation: A)
B)
C)
D)

66) The following graph shows the square footage of 10 homes along with their corresponding heating cost for the most recent month. 66) _____




This graph is an example of a _____.

A) Pareto chart
B) line chart
C) horizontal bar chart
D) scatter plot

Answer: D

Explanation: A)
B)
C)
D)

67) Use a _____ chart if you want to compare the relative sizes of the classes in a frequency distribution and together they comprise all possible categories. 67) _____

A) Pareto
B) horizontal bar
C) vertical bar
D) pie

Answer: D

Explanation: A)
B)
C)
D)

68) Consider the following stem and leaf display. 68) _____

1(0) | 2 4 4
1(5) | 6 6 7 8
2(0) | 0 0 1 1 1 2 2
2(5) | 5 5 7 8
3(0) | 0 1 3 4

Which of the following statements is correct?
A) There are a total of 10 data values in this data set.
B) The class 15-19 contains the most values.
C) This largest data value is 34.
D) The data value that occurs most often is 22.

Answer: C
Explanation: A)
B)
C)
D)

69) Consider the following stem and leaf display. 69) _____

1(0) | 2 4 4
1(5) | 6 6 7 8
2(0) | 0 0 1 1 1 2 2
2(5) | 5 5 7 8
3(0) | 0 1 3 4

Which data value occurs most often?
A) 21 B) 1 C) 200 D) 22

Answer: A
Explanation: A)
B)
C)
D)

70) _____ are values that can take on any real numbers, including numbers that contain decimal points. This data is often the result of measuring observations rather than counting them. 70) _____
A) Discrete B) Ordinal C) Cross-sectional D) Continuous

Answer: D
Explanation: A)
B)
C)
D)

71) Pareto charts also plot the cumulative relative frequency as a line on the chart. This line is known as a(n) _____. 71) _____

A) frequency distribution
B) histogram
C) scatter plot
D) ogive

Answer: D
Explanation: A)
B)
C)
D)

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

72) 72) _____

Answer:
Explanation:

TRUE/FALSE. Write 'T' if the statement is true and 'F' if the statement is false.

73) The goal of constructing a frequency distribution is to identify a useful pattern in the data and often there is more than one acceptable way to accomplish this with grouped quantitative data. 73) _____

Answer: True False
Explanation:

74) Histograms displaying continuous data have gaps between their bars. 74) _____

Answer: True False
Explanation:

75) Empty classes for a frequency distribution using grouped quantitative data result from class widths that are too wide. 75) _____

Answer: True False
Explanation:

76) Fifty employees at CSC Corporation responded to a survey asking for the number of minutes they commute to work in the morning. Management would like to know the proportion of employees whose commute is less than 30 minutes. A cumulative relative frequency distribution using grouped data would provide the information to answer this question. 76) _____

Answer: True False
Explanation:

77) The dependent variable in a scatter plot is influenced by changes in the independent variable. 77) _____

Answer: True False
Explanation:

78) Clustered bar charts are preferred over stacked bar charts when you are comparing data within categories, such as which team scored more points in 2009 when compared to 2010. 78) _____

Answer: True False
Explanation:

79) Under no circumstances should open-ended classes be used for a frequency distribution using grouped quantitative data. 79) _____

Answer: True ✓ False
Explanation:

80) Discrete data can have an infinite number of values within a specific interval. 80) _____

Answer: True ✓ False
Explanation:

81) The sum of the relative frequencies for the relative frequency distribution should be equal to or very close to 1.0 due to rounding. 81) _____

Answer: ✓ True False
Explanation:

82) Pareto charts are a specific type of bar chart used in quality control programs by businesses to graphically display the causes of problems. 82) _____

Answer: ✓ True False
Explanation:

83) A fast food restaurant would like to examine the wait time for customers who use the drive-thru window. The following class boundaries are appropriate to construct a frequency distribution for this data. 83) _____

| Number of Minutes |
|---|
| 0-2 |
| 2-4 |
| 4-6 |
| 6-8 |

Answer: True ✓ False
Explanation:

84) A data set is known as a times series when each data point is associated with a specific point in time. 84) _____

Answer: ✓ True False
Explanation:

85) When constructing a frequency distribution with grouped qualitative data, occasionally you will end up with $k + 1$ or $k - 1$ classes to cover the entire data set. 85) _____

Answer: ✓ True False
Explanation:

86) The estimated class width for a frequency distribution using grouped quantitative data should be rounded to an integer value to make the class boundaries more readable. 86) _____

Answer: ✓ True False
Explanation:

87) The sum of the cumulative relative frequencies for the cumulative relative frequency distribution should be equal to or very close to 1.0 due to rounding. 87) _____

Answer: True ✓ False
Explanation:

88) When constructing a pie chart, all categories in the data set must be included in the pie. 88) _____

Answer: ✓ True False
Explanation:

89) Continuous data are values based on observations that can be counted and are typically represented by whole numbers. 89) _____

Answer: True ✓ False
Explanation:

90) When creating a frequency distribution with grouped qualitative data and 45 data points, five classes should be set up using the $2^k \geq n$ rule. 90) _____

Answer: True ✓ False
Explanation:

91) The only limitation in the number of continuous values within an interval is the level of precision of the measuring instrument. 91) _____

Answer: ✓ True False
Explanation:

92) The stem and leaf display is a graphical technique that can used to display qualitative data. 92) _____

Answer: True ✓ False
Explanation:

93) Choose a pie chart rather than a bar chart if you want to highlight the actual data values and when the classes combined don't form a whole. 93) _____

Answer: True ✓ False
Explanation:

94) When graphing a time series, the convention is to place the time data on the vertical axis of the graph. 94) _____

Answer: True ✓ False
Explanation:

95) A stem and leaf display allows you to observe individual data values while a histogram groups data values together. 95) _____

Answer: ✓ True False
Explanation:

96) The cumulative percentage polygon is a line graph that plots the cumulative relative frequency distribution. 96) _____

Answer: ✓ True False
Explanation:

97) Each category of a pie chart occupies a segment of the pie that represents the cumulative relative frequency of that category. 97) _____

Answer: True ✓ False
Explanation:

98) Income and age are examples of data that are technically discrete but are normally displayed in a continuous format. 98) _____

Answer: ✓ True False
Explanation:

99) Contingency tables help us identify relationships between two or more variables. 99) _____

Answer: ✓ True False
Explanation:

100) A histogram is the appropriate type of graph to display both quantitative and qualitative data. 100) _____

Answer: True ✓ False
Explanation:

101) Equal-size classes refer to classes for a frequency distribution using grouped quantitative data that do not overlap. 101) _____

Answer: True ✓ False
Explanation:

102) Fifty employees at CSC Corporation responded to a survey asking for the number of minutes they commute to work in the morning. Eighteen employees indicated that their commutes are 15 to less than 20 minutes. The relative frequency for this class in a frequency distribution would be 0.18. 102) _____

Answer: True ✓ False
Explanation:

103) The independent variable on scatter plots is placed on the vertical axis on the graph. 103) _____

Answer: True ✓ False
Explanation:

104) Continuous data is often the result of measuring observations rather than counting them. 104) _____

Answer: ✓ True False
Explanation:

105) Pareto charts display the categories in an increasing order with the least problematic categories shown first. 105) _____

Answer: True ✓ False
Explanation:

106) If the class sizes are not equal for a frequency distribution using grouped quantitative data, patterns in the distribution could be misleading. 106) _____

Answer: ✓ True False
Explanation:

107) Quantitative data are values that are categorical, describing a characteristic such as gender or level of education. 107) _____

Answer: True ✓ False
Explanation:

108) Pie charts are an excellent tool for comparing proportions for qualitative (categorical) data. 108) _____

Answer: ✓ True False
Explanation:

109) Choose a pie chart rather than a bar chart if you want to compare the relative sizes of the classes to one another and together they comprise all possible categories. 109) _____

Answer: ✓ True False
Explanation:

110) The dependent variable on scatter plots is placed on the horizontal axis on the graph. 110) _____

Answer: True ✓ False
Explanation:

111) Histograms displaying discrete data usually have gaps between their bars. 111) _____

Answer: ✓ True False
Explanation:

112) Bar charts can display data either horizontally or vertically. 112) _____

Answer: ✓ True False
Explanation:

113) A symmetrical distribution is one in which the right side of the distribution looks like the mirror image of the left side of the distribution. 113) _____

Answer: ✓ True False
Explanation:

114) A frequency distribution is a table that shows the number of data observations that fall into specific intervals. 114) _____

Answer: ✓ True False
Explanation:

115) Clustered bar charts are preferred over stacked bar charts when you are displaying totals in each category, such as what team scored the most points over the two-year period. 115) _____

Answer: True ✓ False
Explanation:

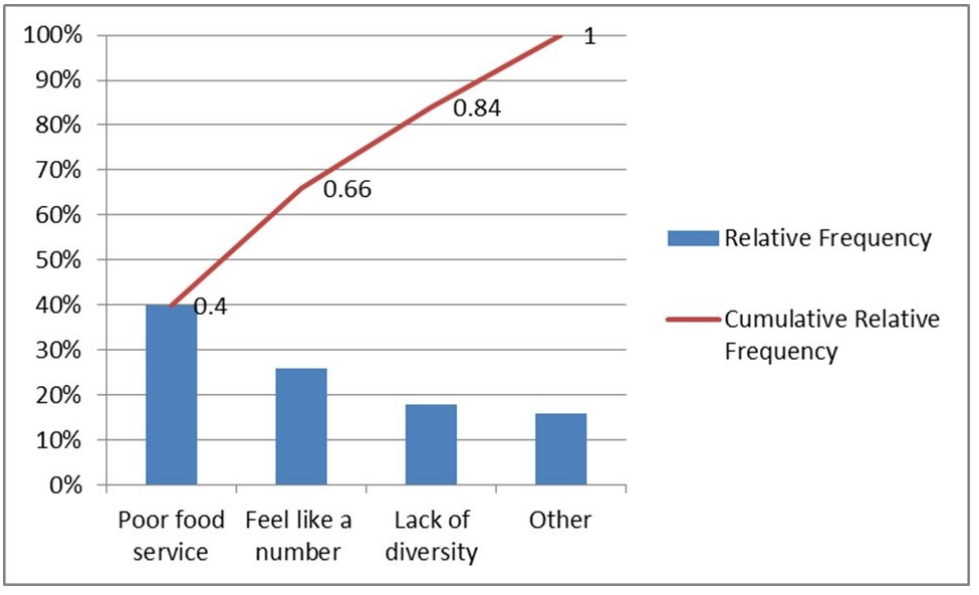
ESSAY. Write your answer in the space provided or on a separate sheet of paper.

116) The following table shows the number of complaints recorded at a college from the student body this past school year.

| Complaint | Frequency |
|---|---|
| Poor food service | 20 |
| Feel like a number | 13 |
| Lack of diversity | 9 |
| Other | 8 |

Construct a Pareto chart to display this data.

Answer:




117) The following table shows the number of points scored by the Green Bay Packers and the Detroit Lions of the National Football League over 15 recent seasons.

Green Bay

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 560 | 388 | 461 | 419 | 435 | 301 | 298 | 424 |
| 442 | 398 | 390 | 353 | 357 | 408 | 422 | |

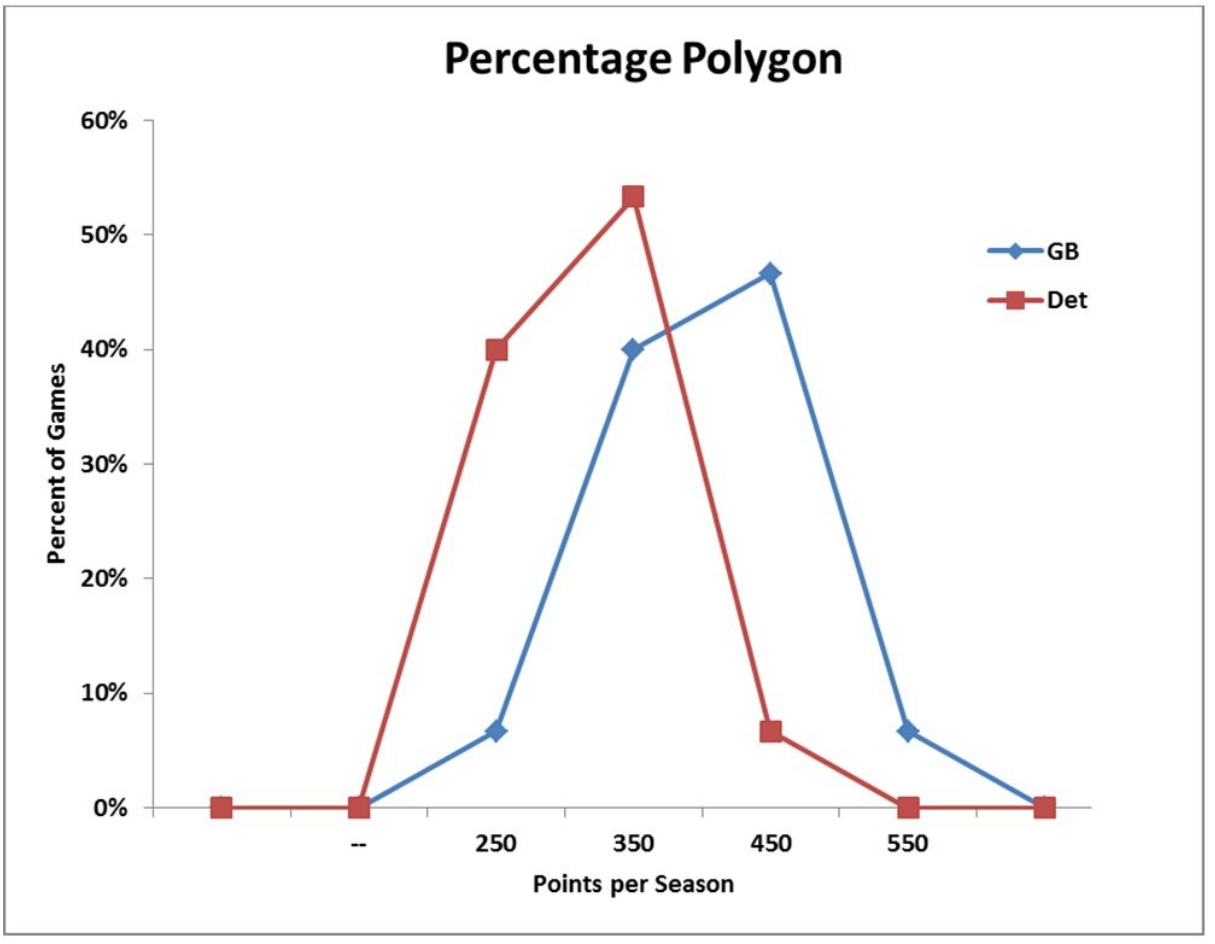
Detroit

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 474 | 362 | 262 | 268 | 346 | 305 | 254 | 296 |
| 270 | 306 | 270 | 307 | 322 | 306 | 379 | |

Use four classes, each with a class width of 100. Start classes with 201-300, 301-400, and so on, and construct a percentage polygon. What conclusions can you draw comparing these two teams?

Answer:

Answer:




Green Bay tended to score more points per season than Detroit during this time span.

118) The following data show the monthly rental for a random sample of one-bedroom apartments in York, Pennsylvania.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| \$600 | \$615 | \$660 | \$660 | \$675 | \$680 | \$690 | \$700 | \$720 | \$725 |
| \$755 | \$760 | \$775 | \$775 | \$780 | \$780 | \$780 | \$785 | \$810 | \$840 |

Construct a cumulative relative frequency distribution for this data and determine the probability a randomly selected one-bedroom apartment will rent for less than \$700 per month.

Answer: Set $k = 5$ because $2^5 = 32 \geq 20$

Estimated Class Width = $\frac{\$840 - \$600}{5} = \$48 \approx \$50$

| Monthly Rent | Frequency | Relative Frequency | Cumulative Relative Frequency |
|---|---|---|---|
| \$600 to under \$650 | 2 | 0.10 | 0.10 |
| \$650 to under \$700 | 5 | 0.25 | 0.35 |
| \$700 to under \$750 | 3 | 0.15 | 0.50 |
| \$750 to under \$800 | 8 | 0.40 | 0.90 |
| \$800 to under \$850 | 2 | 0.10 | 1.00 |
| Total | 20 | 1.00 | |

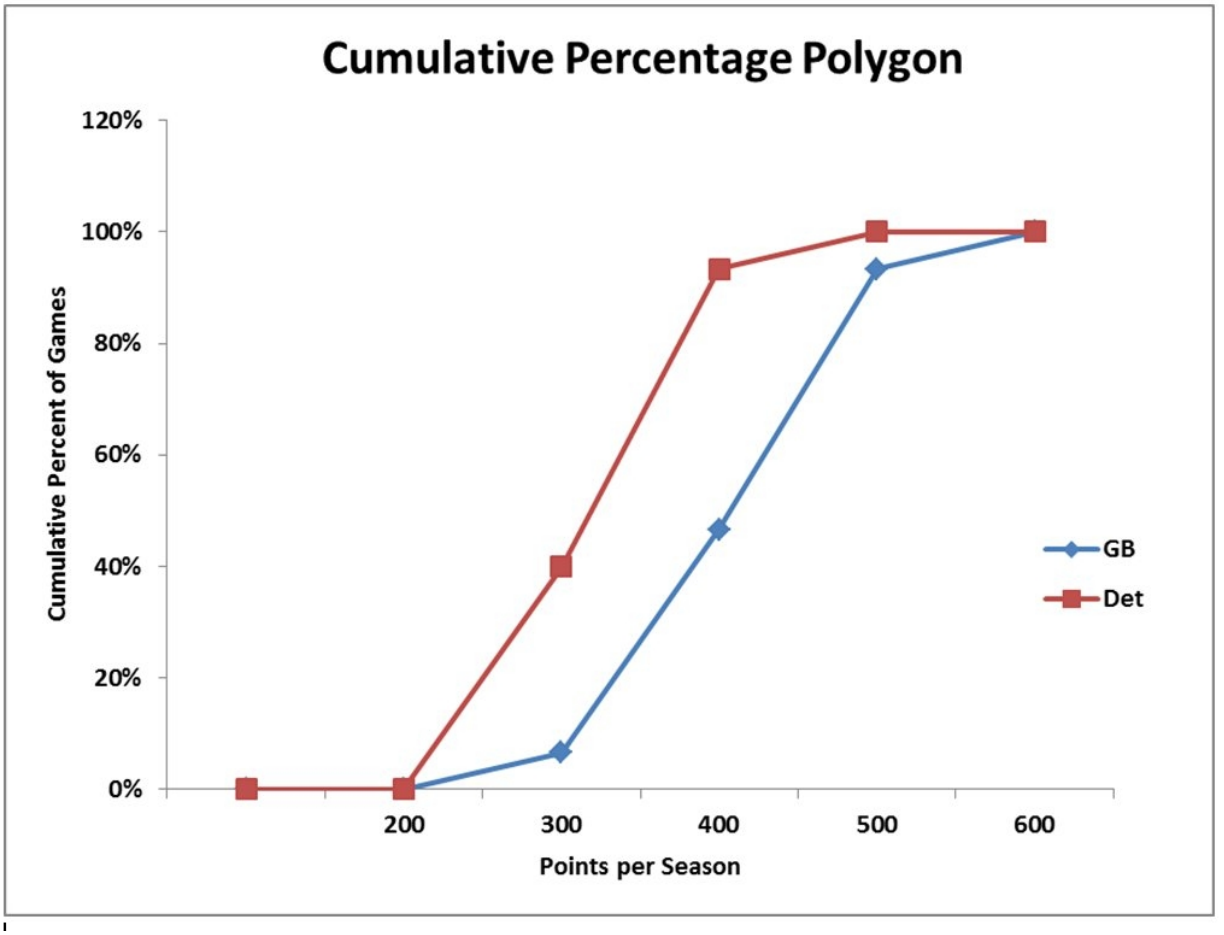
$P(x < \$700) = 0.35$

119) The following table shows the number of points scored by the Green Bay Packers and the Detroit Lions of the National Football League over 15 recent seasons.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Green Bay | | | | | | | |
| 560 | 388 | 461 | 419 | 435 | 301 | 298 | 424 |
| 442 | 398 | 390 | 353 | 357 | 408 | 422 | |
| Detroit | | | | | | | |
| 474 | 362 | 262 | 268 | 346 | 305 | 254 | 296 |
| 270 | 306 | 270 | 307 | 322 | 306 | 379 | |

Use four classes, each with a class width of 100. Start classes with 201-300, 301-400, and so on, and construct a cumulative percentage polygon. What conclusions can you draw comparing these two teams?

Answer:




Green Bay tended to score more points per season than Detroit during this time span.

120) The following data show the monthly rental for a random sample of one-bedroom apartments in York, Pennsylvania.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| \$600 | \$615 | \$660 | \$660 | \$675 | \$680 | \$690 | \$700 | \$720 | \$725 |
| \$755 | \$760 | \$775 | \$775 | \$780 | \$780 | \$780 | \$785 | \$810 | \$840 |

Construct a relative frequency distribution for this data and determine the probability a randomly selected one-bedroom apartment will rent between \$700 and less than \$750 per month.

Answer: Set $k = 5$ because $2^5 = 32 \geq 20$

Estimated Class Width = $\frac{\$840 - \$600}{5} = \$48 \approx \$50$

| Monthly Rent | Frequency | Relative Frequency |
|---|---|---|
| \$600 to under \$650 | 2 | 0.10 |
| \$650 to under \$700 | 5 | 0.25 |
| \$700 to under \$750 | 3 | 0.15 |
| \$750 to under \$800 | 8 | 0.40 |
| \$800 to under \$850 | 2 | 0.10 |
| Total | 20 | 1.00 |

$P(\$700 \leq x < \$750) = 0.15$

121) The following data show the monthly rental for a random sample of one-bedroom apartments in York, Pennsylvania.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| \$600 | \$615 | \$660 | \$660 | \$675 | \$680 | \$690 | \$700 | \$720 | \$725 |
| \$755 | \$760 | \$775 | \$775 | \$780 | \$780 | \$780 | \$785 | \$810 | \$840 |

Construct a frequency distribution for this data.

Answer: Set $k = 5$ because $2^5 = 32 \geq 20$

Estimated Class Width = $\frac{\$840 - \$600}{5} = \$48 \approx \$50$

| Monthly Rent | Frequency |
|---|---|
| \$600 to under \$650 | 2 |
| \$650 to under \$700 | 5 |
| \$700 to under \$750 | 3 |
| \$750 to under \$800 | 8 |
| \$800 to under \$850 | 2 |
| Total | 20 |

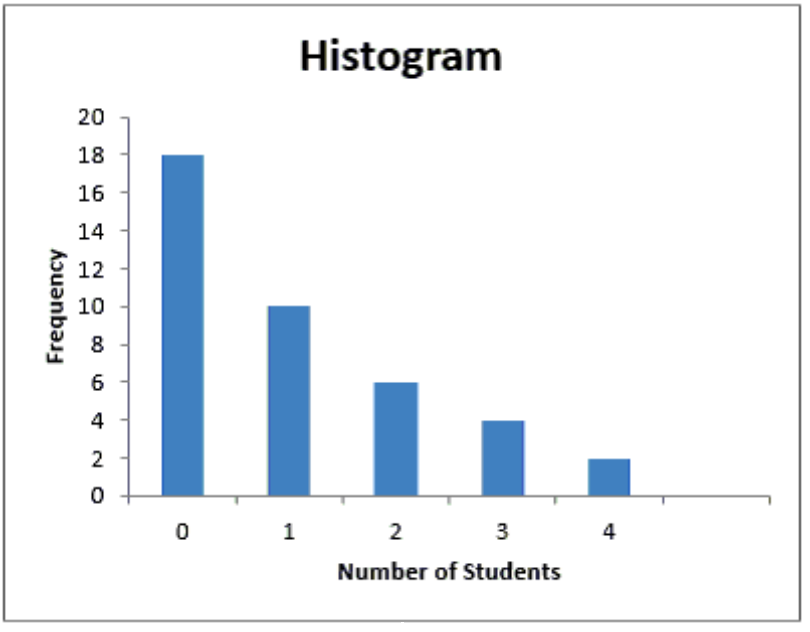
122) The following data shows the number of students that came to office hours per day for a particular faculty member.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 |

Construct a histogram for this data.

Answer:

| Number of Students | Frequency |
|---|---|
| 0 | 18 |
| 1 | 10 |
| 2 | 6 |
| 3 | 4 |
| 4 | 2 |
| Total | 40 |

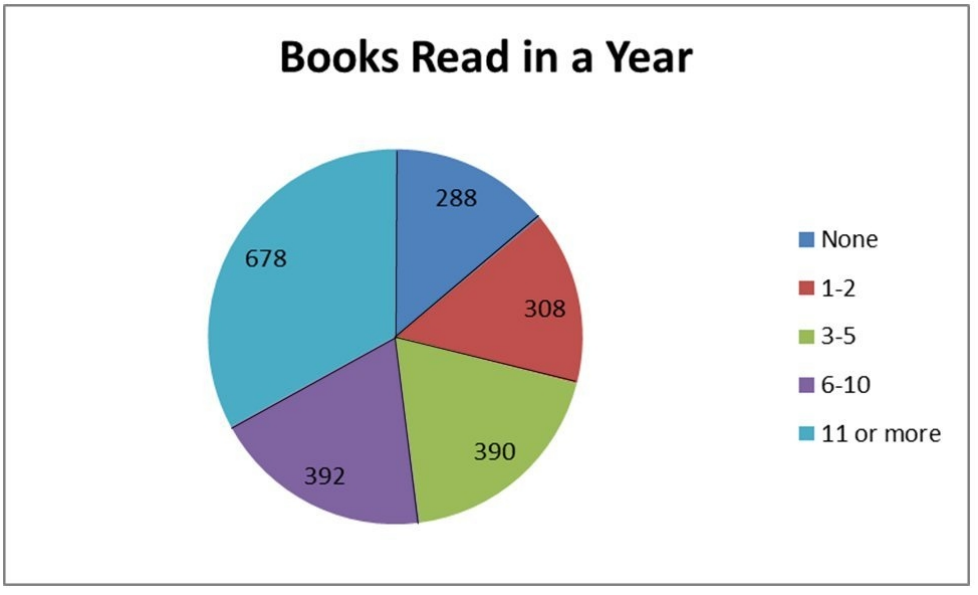


123) A survey of 2,056 adults was asked how many books they typically read in a year. The following table shows the frequency distribution of the respondents.

| Response | Frequency |
|---|---|
| None | 288 |
| 1-2 | 308 |
| 3-5 | 390 |
| 6-10 | 392 |
| 11 or more | 678 |

Construct a chart that best displays this data.

Answer:

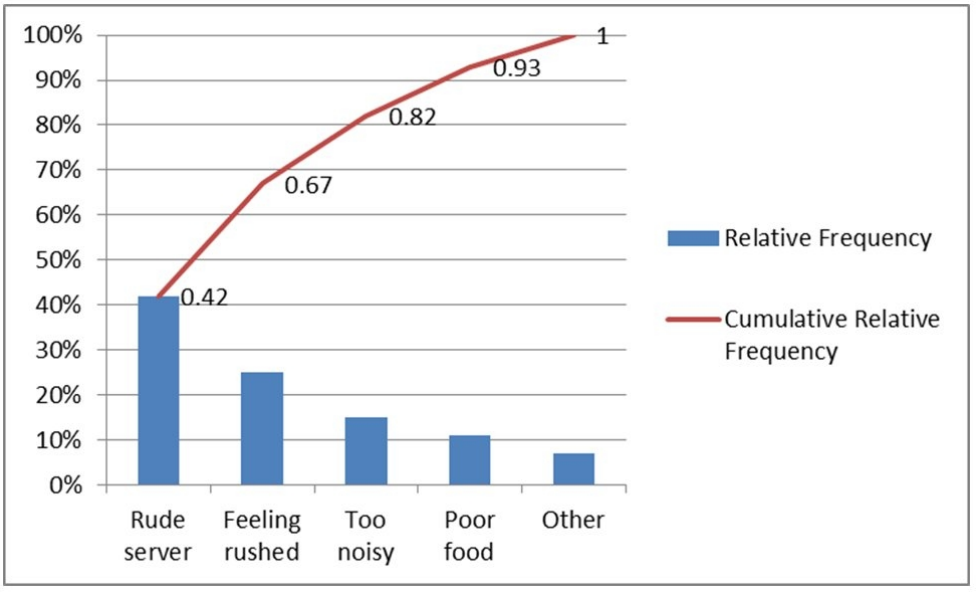


124) The following table shows the number of complaints recorded at a restaurant over the past several years.

| Complaint | Frequency |
|---|---|
| Rude server | 42 |
| Feeling rushed | 25 |
| Too noisy | 15 |
| Poor food | 11 |
| Other | 7 |

Construct a Pareto chart to display this data.

Answer:



125) Chris is a photographer and sells two types of photography for consignment in an art store—landscapes and flower close-ups. She also sells each in three print sizes—8x10, 11x14, and 13x19 inches. The following table shows the number of prints of each type and size that have recently sold.

| Type | Size | Type | Size |
|---|---|---|---|
| landscape | 13x19 | flower | 11x14 |
| landscape | 11x14 | landscape | 11x14 |
| flower | 11x14 | landscape | 8x10 |
| flower | 8x10 | flower | 8x10 |
| landscape | 13x19 | landscape | 11x14 |
| flower | 8x10 | landscape | 13x19 |
| flower | 11x14 | flower | 11x14 |
| flower | 13x19 | landscape | 11x14 |
| landscape | 13x19 | landscape | 13x19 |

Construct a contingency table for this data.

Answer:

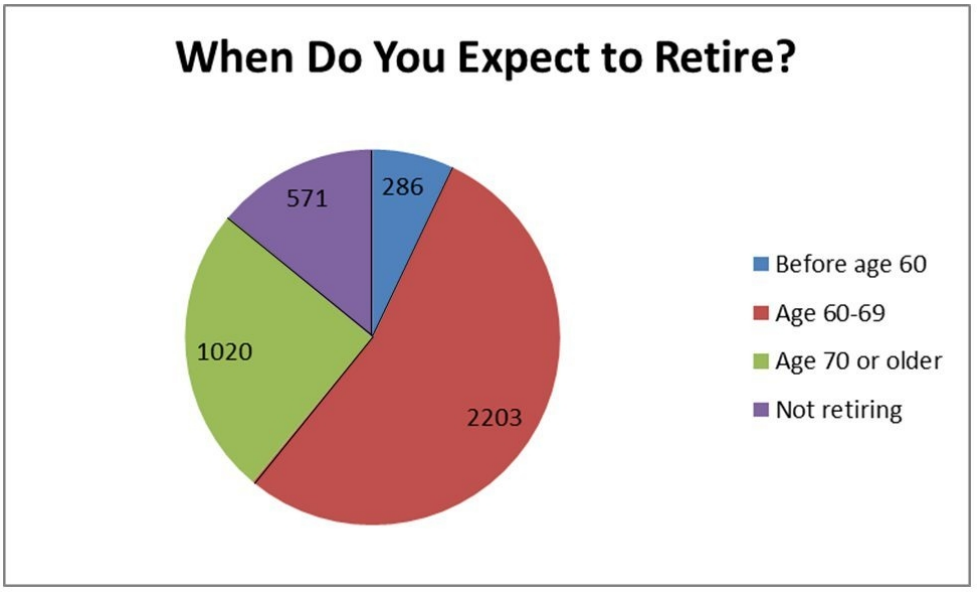
| | Landscape | Flower |
|---|---|---|
| 8x10 | 1 | 3 |
| 11x14 | 4 | 4 |
| 13x19 | 5 | 1 |

126) A survey of 4,080 workers was asked when they expected to retire. The following table shows the frequency distribution of the respondents.

| Response | Frequency |
|---|---|
| Before age 60 | 286 |
| Age 60-69 | 2,203 |
| Age 70 or older | 1,020 |
| Not retiring | 571 |

Construct a chart that best displays this data.

Answer:

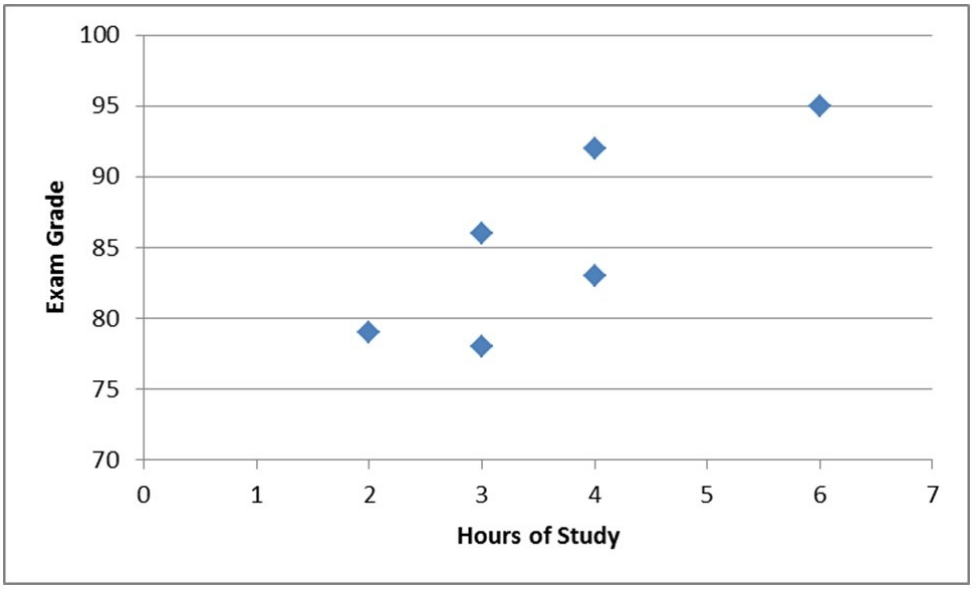


127) The following table shows the number of hours that six students studied for their statistics exam and their corresponding exam grades.

| Hours of Study | Exam Grade |
|---|---|
| 3 | 86 |
| 6 | 95 |
| 4 | 92 |
| 4 | 83 |
| 3 | 78 |
| 2 | 79 |

Construct a scatter plot to display this data. What conclusions can be drawn?

Answer:



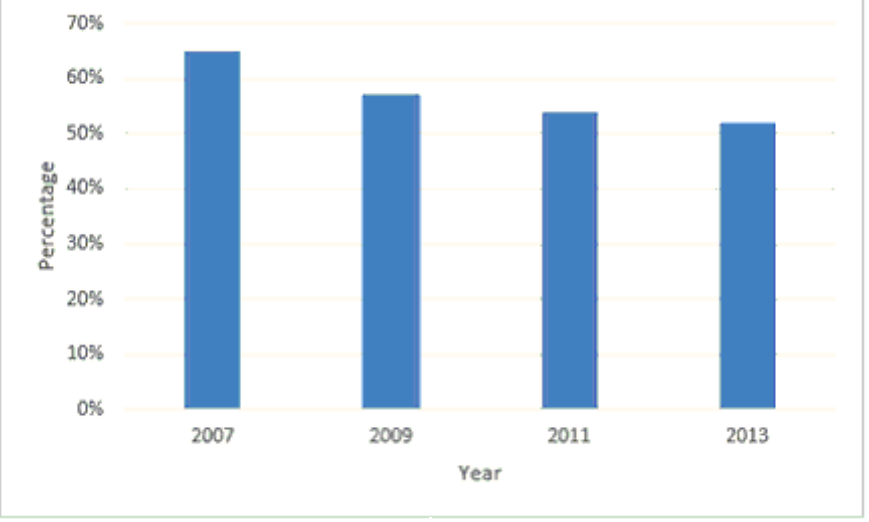

It appears that the students who studied longer, in general, did better on the exam.

128) The following table shows the percentage of adults invested in stocks through 401(k)s or mutual funds from a Gallup survey.

| Year | Percentage |
|---|---|
| 2007 | 65% |
| 2009 | 57% |
| 2011 | 54% |
| 2013 | 52% |

Construct the type of chart that would be most appropriate if the goal was to compare the percentages over time.

Answer:

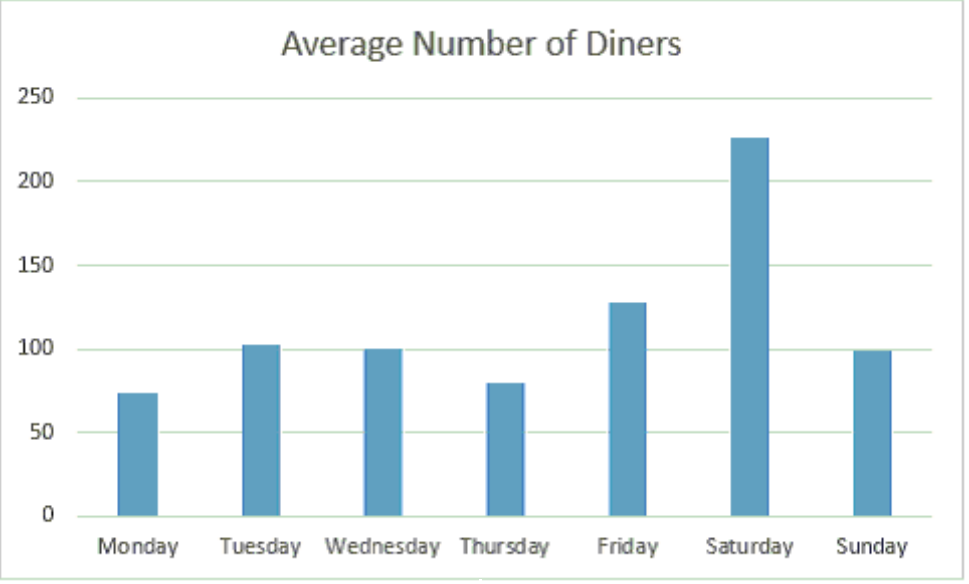


129) The following table shows the average number of diners at a restaurant during each day of the week.

| Day | Average Number of Diners |
|---|---|
| Monday | 73 |
| Tuesday | 102 |
| Wednesday | 100 |
| Thursday | 79 |
| Friday | 128 |
| Saturday | 227 |
| Sunday | 99 |

Construct the type of chart that would be most appropriate if the goal was to compare the number of diners during the week.

Answer:



130) The following data show the number of pairs of men's New Balance sneakers that were sold over the last 25 weeks at a discount shoe store.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | 4 | 6 | 6 | 8 | 8 | 9 | 11 | 11 |
| 11 | 12 | 12 | 14 | 14 | 14 | 15 | 17 | 17 |
| 17 | 19 | 19 | 20 | 21 | 24 | 24 | | |

Construct a relative frequency distribution for this data and determine the probability that between 6 to 10 pairs of New Balance shoes will be sold next week.

Answer: Set $k = 5$ because $2^5 = 32 \geq 25$.

Estimated Class Width $= \frac{24 - 1}{5} = 4.6 \approx 5$

| Number of Pairs | Frequency | Relative Frequency |
|---|---|---|
| 1-5 | 2 | 0.08 |
| 6-10 | 5 | 0.20 |
| 11-15 | 9 | 0.36 |
| 16-20 | 6 | 0.24 |
| 21-25 | 3 | 0.12 |
| Total | 25 | 1.00 |

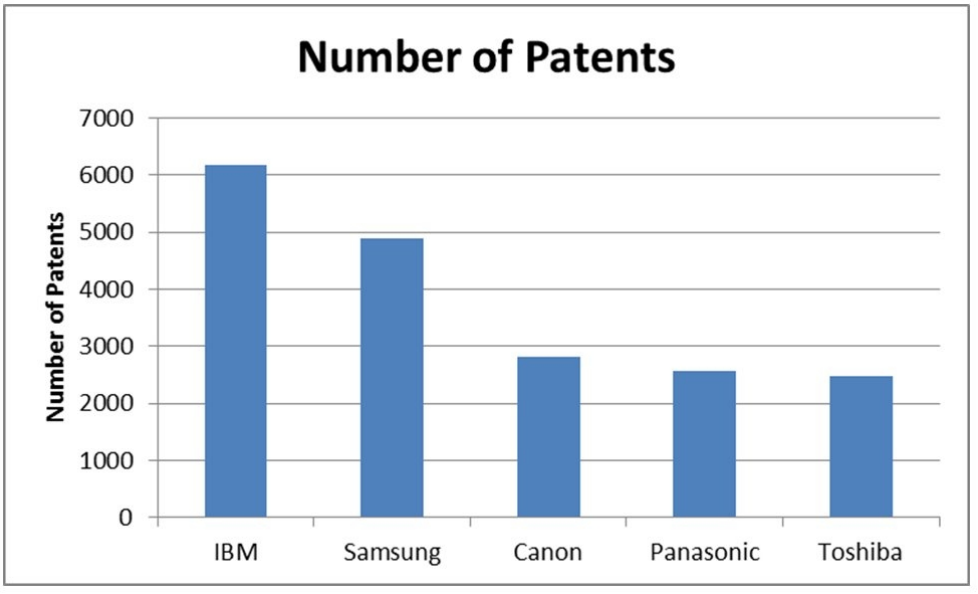
$P(6 \leq x \leq 10) = 0.20$

131) The following table shows the number of patents that various corporations filed in a recent year.

| Company | Number of Patents |
|---|---|
| IBM | 6,180 |
| Samsung | 4,894 |
| Canon | 2,821 |
| Panasonic | 2,559 |
| Toshiba | 2,483 |

Construct the type of chart that would be most appropriate if the goal was to compare the number of patents among companies.

Answer:

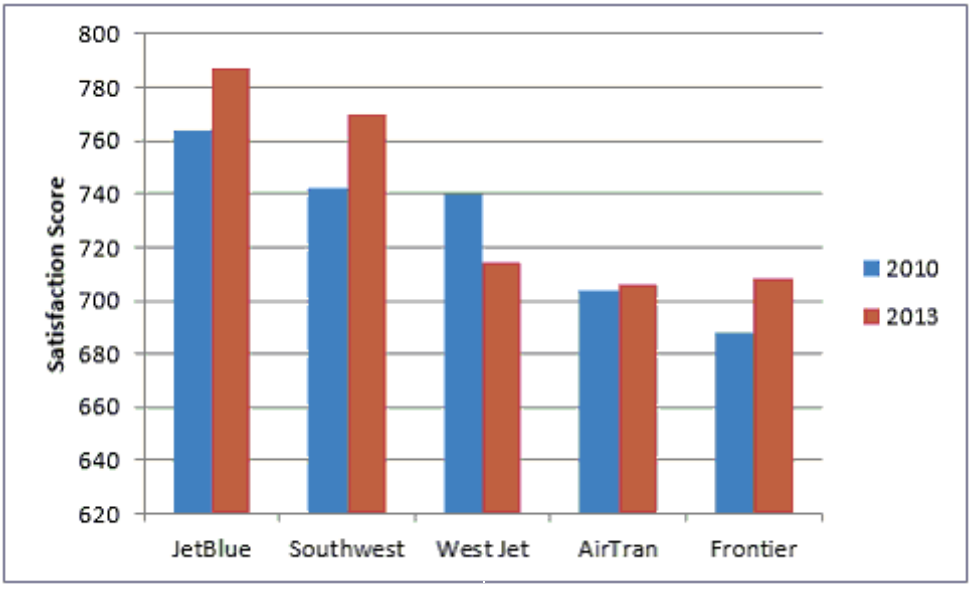


132) The following table shows customer satisfaction scores for five airlines in 2010 and 2013.

| Airline | 2010 | 2013 |
|---|---|---|
| JetBlue | 764 | 787 |
| Southwest | 742 | 770 |
| West Jet | 740 | 714 |
| AirTran | 704 | 706 |
| Frontier | 688 | 708 |

Construct the type of chart that would be most appropriate if the goal was to investigate changes in satisfaction scores for each airline between the two years.

Answer:



133) Costco is a warehouse store that has two types of membership—standard and executive. The following table shows the gender and type of membership of the last 20 customers at a particular store.

| Membership | Gender | Membership | Gender |
|---|---|---|---|
| standard | male | standard | female |
| executive | female | standard | male |
| standard | female | standard | female |
| executive | male | standard | male |
| standard | male | standard | female |
| executive | male | executive | female |
| standard | male | executive | female |
| executive | female | executive | male |
| standard | male | executive | female |
| executive | female | executive | female |

Construct a contingency table for this data.

Answer:

| | Standard | Executive |
|---|---|---|
| Female | 4 | 7 |
| Male | 6 | 3 |

134) The following data shows the number of students that came to office hours per day for a particular faculty member.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 |

Construct a cumulative relative frequency distribution for this data and determine the probability that fewer than three students will come to office hours today.

Answer:

| Number of Students | Frequency | Relative Frequency | Cumulative Relative Frequency |
|---|---|---|---|
| 0 | 18 | 0.45 | 0.45 |
| 1 | 10 | 0.25 | 0.70 |
| 2 | 6 | 0.15 | 0.85 |
| 3 | 4 | 0.10 | 0.95 |
| 4 | 2 | 0.05 | 1.00 |
| Total | 40 | 1.00 | |

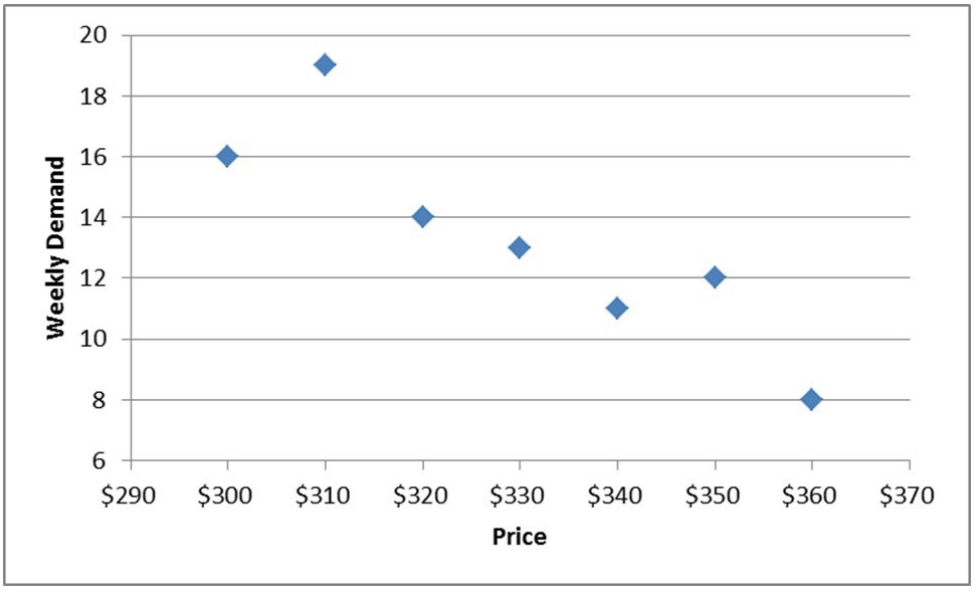
$P(x < 3) = 0.85$

135) The following table shows the weekly demand for a particular digital camera and the corresponding price of that camera during the week.

| Weekly Demand | Price |
|---|---|
| 16 | $300 |
| 19 | $310 |
| 14 | $320 |
| 13 | $330 |
| 11 | $340 |
| 12 | $350 |
| 8 | $360 |

Construct a scatter plot to display this data. What conclusions can be drawn?

Answer:




It appears that as the price increases, demand for the camera decreases.

136) The following data show the number of pairs of men's New Balance sneakers that were sold over the last 25 weeks at a discount shoe store.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | 4 | 6 | 6 | 8 | 8 | 9 | 11 | 11 |
| 11 | 12 | 12 | 14 | 14 | 14 | 15 | 17 | 17 |
| 17 | 19 | 19 | 20 | 21 | 24 | 24 | | |

Construct a frequency distribution for this data.

Answer: Set $k = 5$ because $2^5 = 32 \geq 25$.

Estimated Class Width = $\frac{24 - 1}{5} = 4.6 \approx 5$

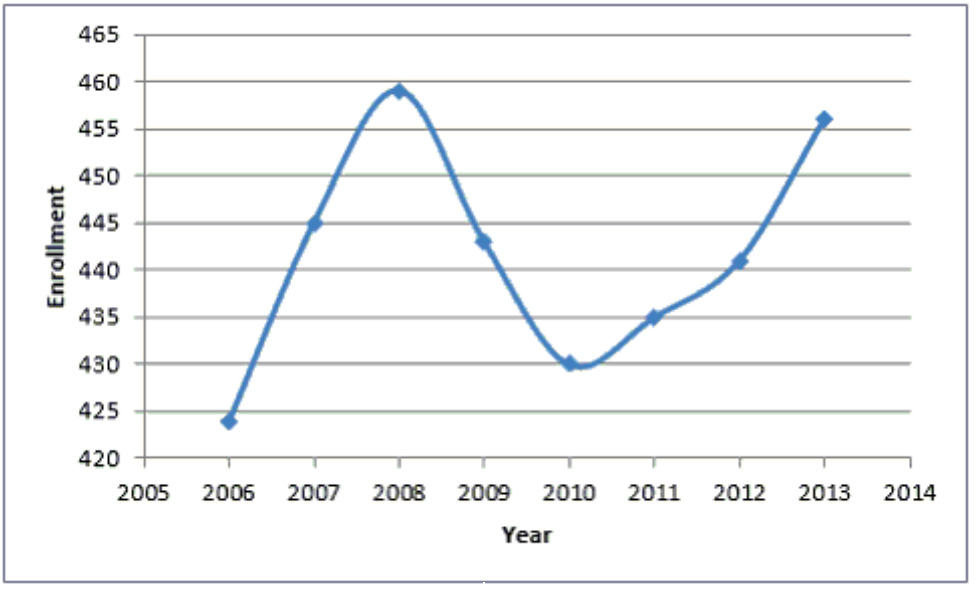
| Number of Pairs | Frequency |
|---|---|
| 1-5 | 2 |
| 6-10 | 5 |
| 11-15 | 9 |
| 16-20 | 6 |
| 21-25 | 3 |
| Total | 25 |

137) The following table shows the enrollment at a private grade school from 2006 until 2013.

| Year | Enrollment |
|---|---|
| 2006 | 424 |
| 2007 | 445 |
| 2008 | 459 |
| 2009 | 443 |
| 2010 | 430 |
| 2011 | 435 |
| 2012 | 441 |
| 2013 | 456 |

Construct a line chart to display this data.

Answer:



138) The following data show the number of pairs of men's New Balance sneakers that were sold over the last 25 weeks at a discount shoe store.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | 4 | 6 | 6 | 8 | 8 | 9 | 11 | 11 |
| 11 | 12 | 12 | 14 | 14 | 14 | 15 | 17 | 17 |
| 17 | 19 | 19 | 20 | 21 | 24 | 24 | | |

Construct a cumulative relative frequency distribution for this data and determine the probability that 15 or fewer pairs of New Balance shoes will be sold next week.

Answer: Set $k = 5$ because $2^5 = 32 \geq 25$.

Estimated Class Width = $\frac{24 - 1}{5} = 4.6 \approx 5$

| Number of Pairs | Frequency | Relative Frequency | Cumulative Relative Frequency |
|---|---|---|---|
| 1-5 | 2 | 0.08 | 0.08 |
| 6-10 | 5 | 0.20 | 0.28 |
| 11-15 | 9 | 0.36 | 0.64 |
| 16-20 | 6 | 0.24 | 0.88 |
| 21-25 | 3 | 0.12 | 1.00 |
| Total | 25 | 1.00 | |

$P(x \leq 15) = 0.64$

139) The following data represents the high ambient temperature for a particular city over the past 16 days.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 52 | 56 | 56 | 58 | 59 | 60 | 62 | 65 |
| 69 | 73 | 73 | 74 | 76 | 76 | 77 | 78 |

Construct a stem and leaf display for this data.

Answer: 5 | 2 6 6 8 9
6 | 0 2 5 9
7 | 3 3 4 6 6 7 8

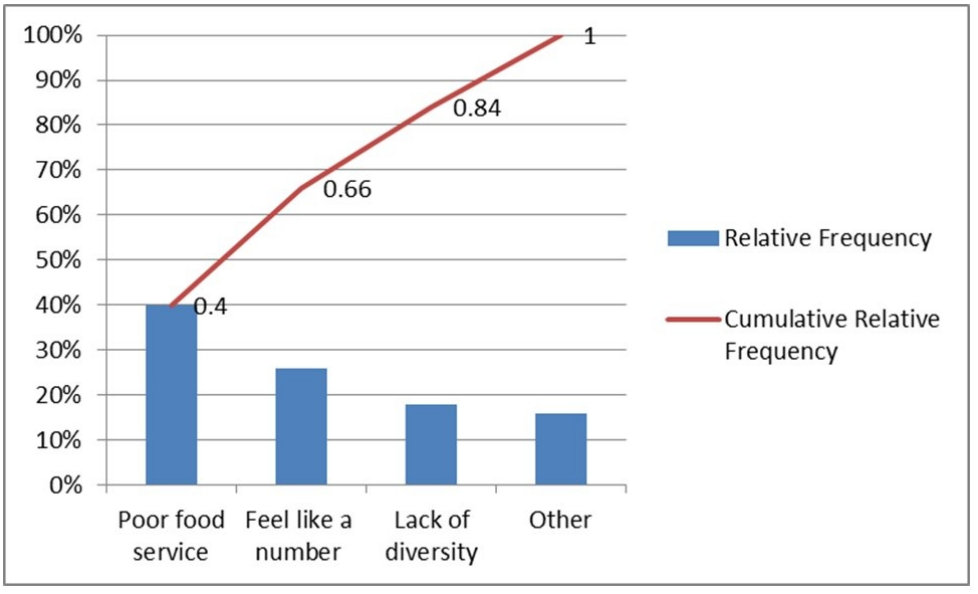
42) B
43) B
44) B
45) B
46) B
47) D
48) B
49) A
50) B

Answer Key
Testname: C2

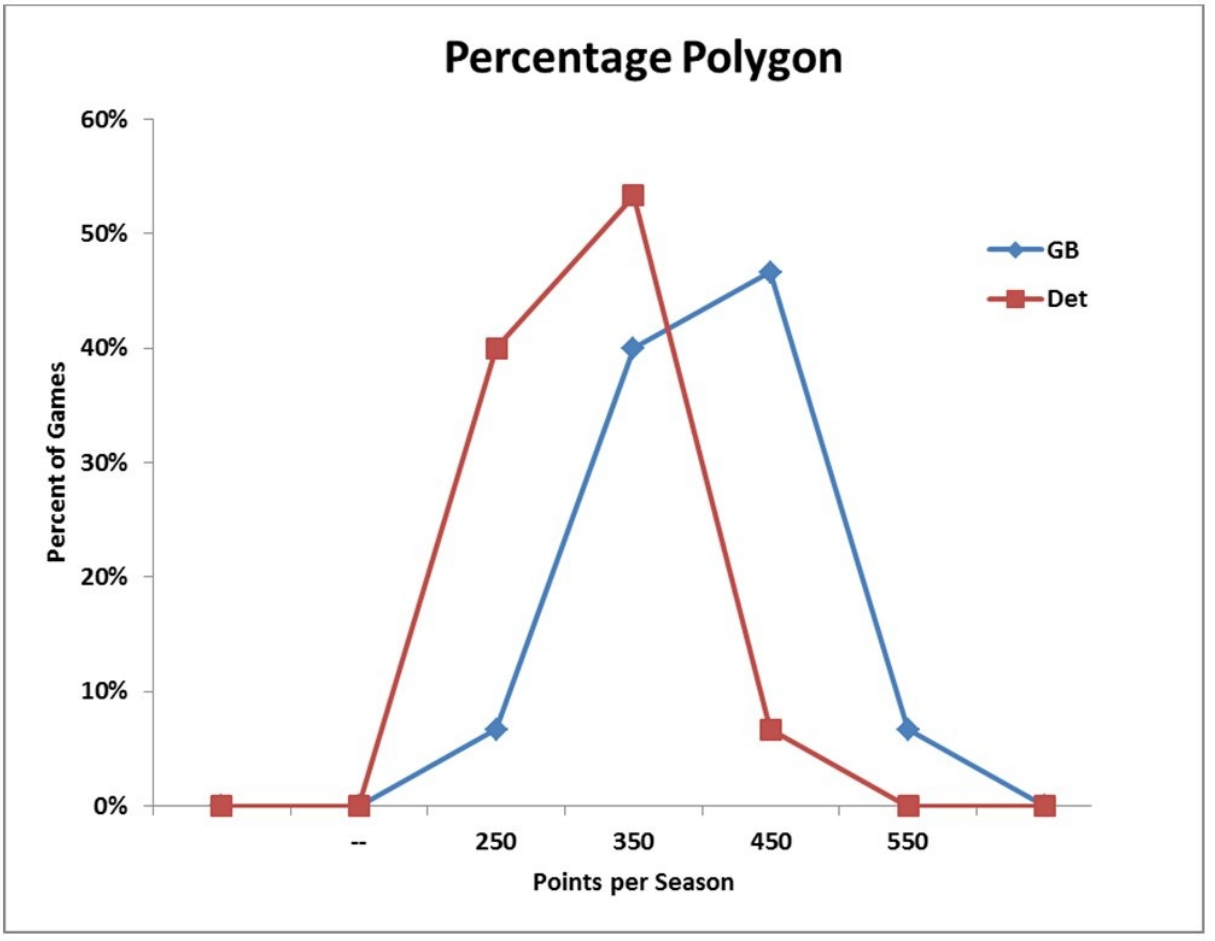
51) A
52) D
53) C
54) C
55) B
56) C
57) A
58) C
59) C
60) B
61) A
62) B
63) B
64) C
65) D
66) D
67) D
68) C
69) A
70) D
71) D
72)
73) TRUE
74) FALSE
75) FALSE
76) TRUE
77) TRUE
78) TRUE
79) FALSE
80) FALSE
81) TRUE
82) TRUE
83) FALSE
84) TRUE
85) TRUE
86) TRUE
87) FALSE
88) TRUE
89) FALSE
90) FALSE
91) TRUE
92) FALSE
93) FALSE
94) FALSE
95) TRUE
96) TRUE
97) FALSE
98) TRUE
99) TRUE
100) FALSE

Answer Key
Testname: C2

101) FALSE
102) FALSE
103) FALSE
104) TRUE
105) FALSE
106) TRUE
107) FALSE
108) TRUE
109) TRUE
110) FALSE
111) TRUE
112) TRUE
113) TRUE
114) TRUE
115) FALSE
116)



117)




Green Bay tended to score more points per season than Detroit during this time span.

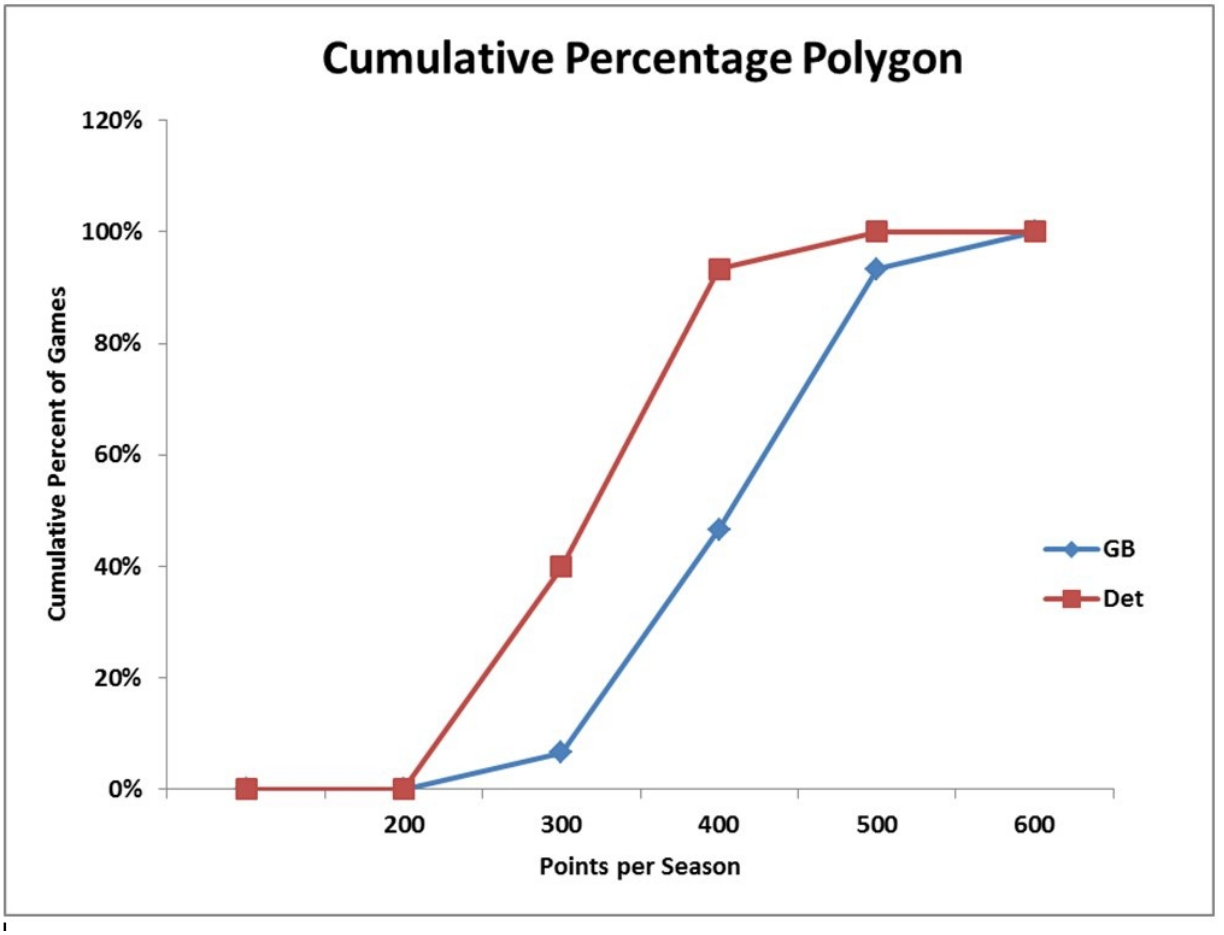
118) Set $k = 5$ because $2^5 = 32 \geq 20$

Estimated Class Width = $\frac{\$840 - \$600}{5} = \$48 \approx \$50$

| Monthly Rent | Frequency | Relative Frequency | Cumulative Relative Frequency |
|---|---|---|---|
| \$600 to under \$650 | 2 | 0.10 | 0.10 |
| \$650 to under \$700 | 5 | 0.25 | 0.35 |
| \$700 to under \$750 | 3 | 0.15 | 0.50 |
| \$750 to under \$800 | 8 | 0.40 | 0.90 |
| \$800 to under \$850 | 2 | 0.10 | 1.00 |
| Total | 20 | 1.00 | |

$P(x < \$700) = 0.35$

119)




Green Bay tended to score more points per season than Detroit during this time span.

120) Set $k = 5$ because $2^5 = 32 \geq 20$

Estimated Class Width = $\frac{\$840 - \$600}{5} = \$48 \approx \$50$

| Monthly Rent | Frequency | Relative Frequency |
|---|---|---|
| \$600 to under \$650 | 2 | 0.10 |
| \$650 to under \$700 | 5 | 0.25 |
| \$700 to under \$750 | 3 | 0.15 |
| \$750 to under \$800 | 8 | 0.40 |
| \$800 to under \$850 | 2 | 0.10 |
| Total | 20 | 1.00 |

$P(\$700 \leq x < \$750) = 0.15$

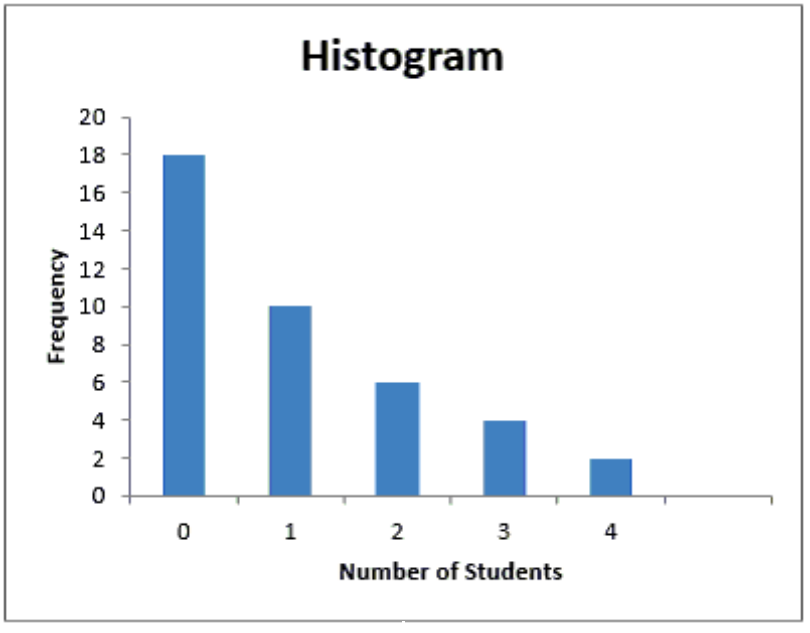
121) Set $k = 5$ because $2^5 = 32 \geq 20$

Estimated Class Width = $\frac{\$840 - \$600}{5} = \$48 \approx \$50$

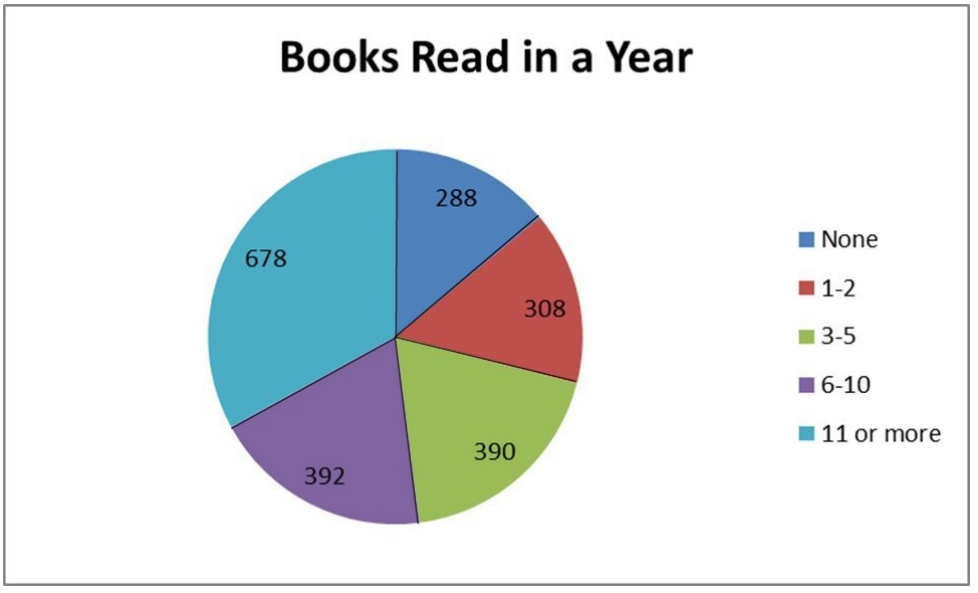
| Monthly Rent | Frequency |
|---|---|
| $600 to under $650 | 2 |
| $650 to under $700 | 5 |
| $700 to under $750 | 3 |
| $750 to under $800 | 8 |
| $800 to under $850 | 2 |
| Total | 20 |

122)

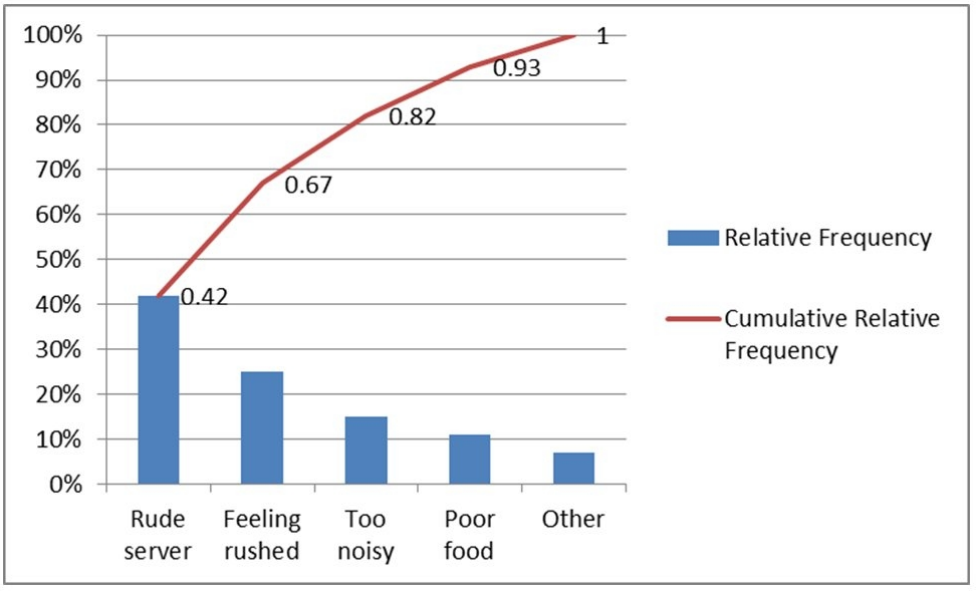
| Number of Students | Frequency |
|---|---|
| 0 | 18 |
| 1 | 10 |
| 2 | 6 |
| 3 | 4 |
| 4 | 2 |
| Total | 40 |



123)



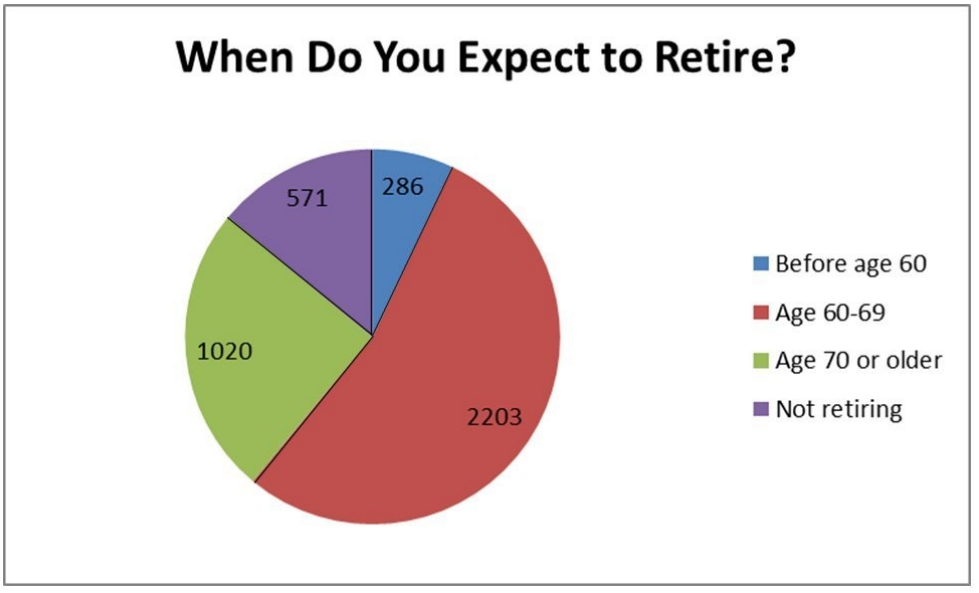

124)



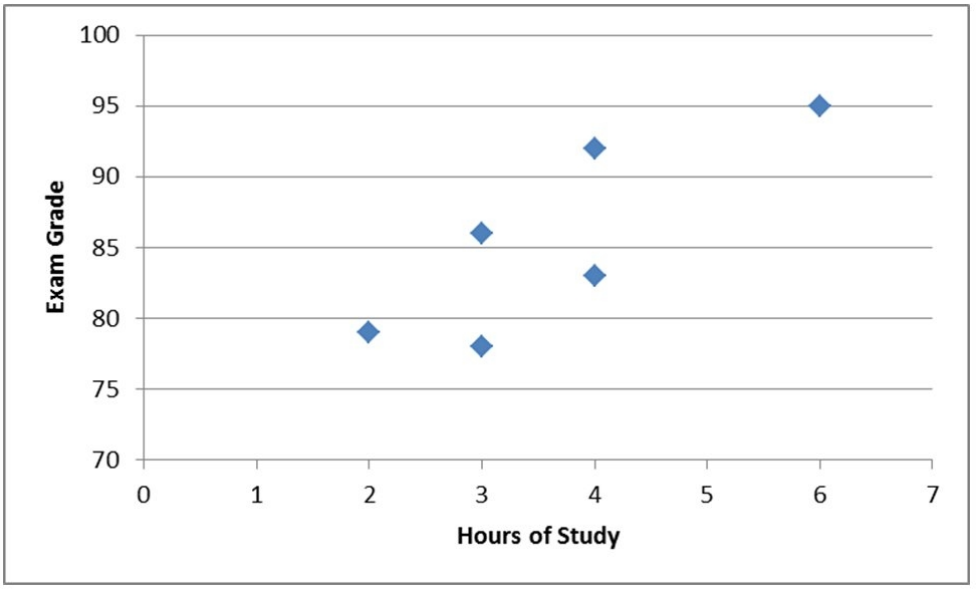

125)

| | Landscape | Flower |
|---|---|---|
| 8x10 | 1 | 3 |
| 11x14 | 4 | 4 |
| 13x19 | 5 | 1 |

126)

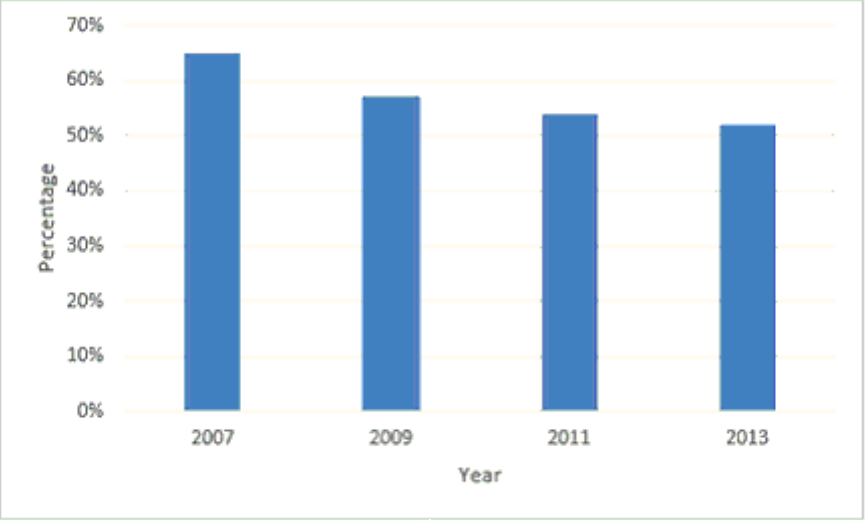



127)

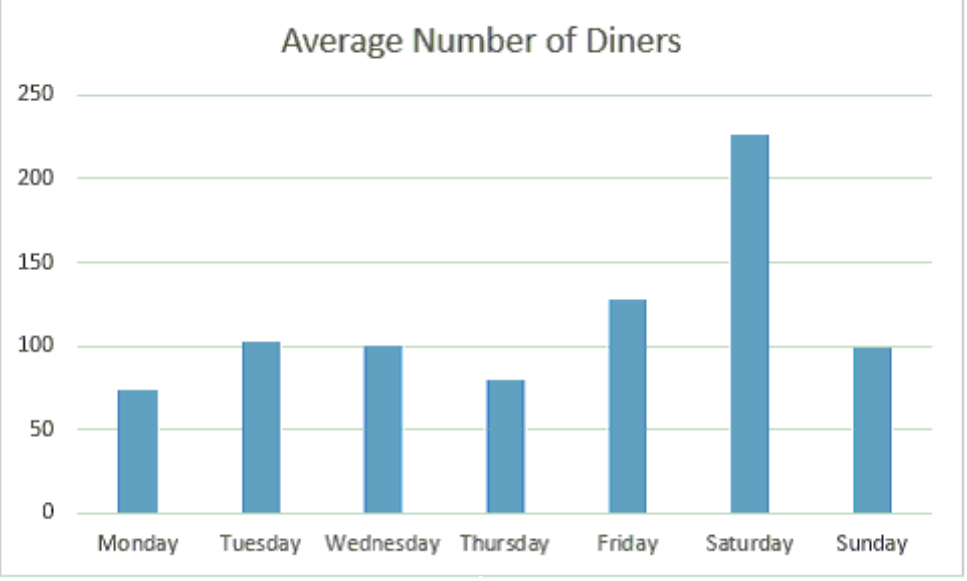



It appears that the students who studied longer, in general, did better on the exam.

128)




129)



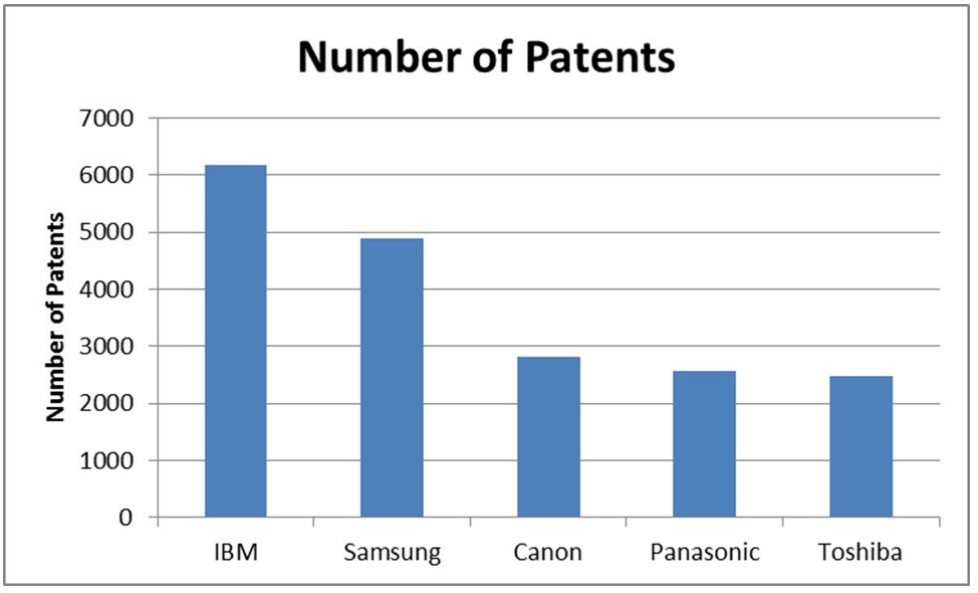

130) Set $k = 5$ because $2^5 = 32 \geq 25$.

Estimated Class Width = $\frac{24 - 1}{5} = 4.6 \approx 5$

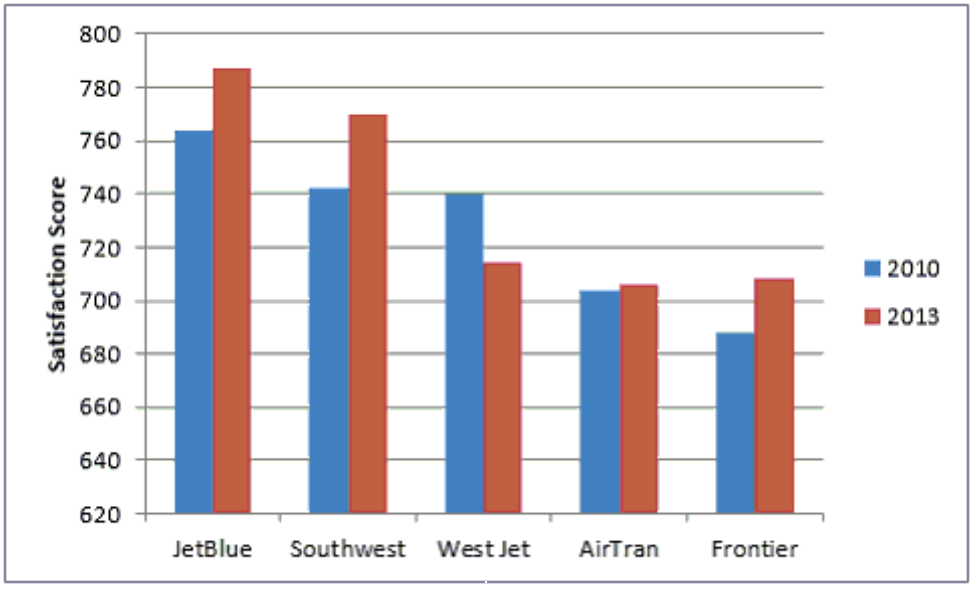
| Number of Pairs | Frequency | Relative Frequency |
|---|---|---|
| 1-5 | 2 | 0.08 |
| 6-10 | 5 | 0.20 |
| 11-15 | 9 | 0.36 |
| 16-20 | 6 | 0.24 |
| 21-25 | 3 | 0.12 |
| Total | 25 | 1.00 |

$P(6 \leq x \leq 10) = 0.20$

131)




132)




133)

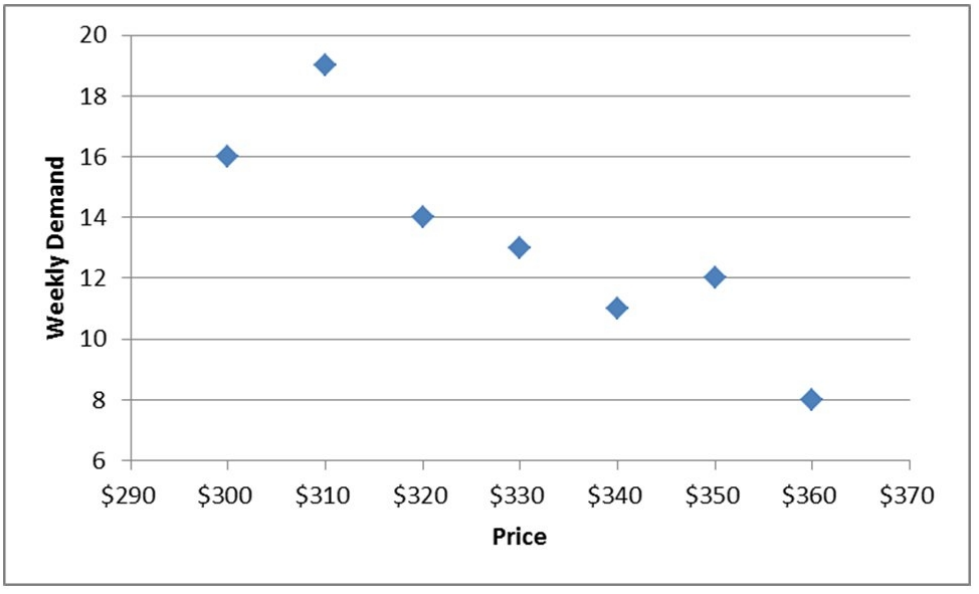
| | Standard | Executive |
|---|---|---|
| Female | 4 | 7 |
| Male | 6 | 3 |

134)

| Number of Students | Frequency | Relative Frequency | Cumulative Relative Frequency |
|---|---|---|---|
| 0 | 18 | 0.45 | 0.45 |
| 1 | 10 | 0.25 | 0.70 |
| 2 | 6 | 0.15 | 0.85 |
| 3 | 4 | 0.10 | 0.95 |
| 4 | 2 | 0.05 | 1.00 |
| Total | 40 | 1.00 | |

$P(x < 3) = 0.85$

135)



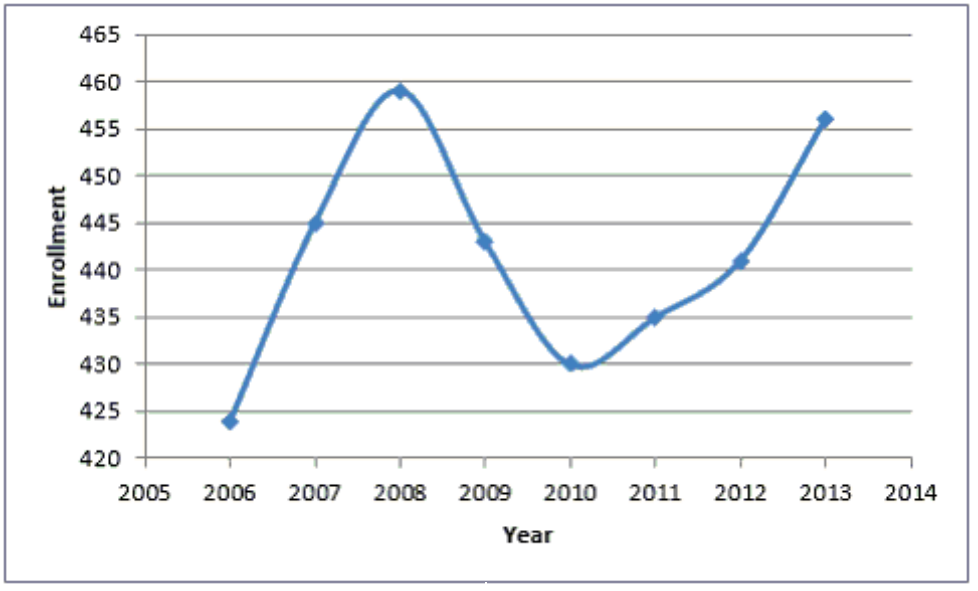

It appears that as the price increases, demand for the camera decreases.

136) Set $k = 5$ because $2^5 = 32 \geq 25$.

Estimated Class Width = $\frac{24 - 1}{5} = 4.6 \approx 5$

| Number of Pairs | Frequency |
|---|---|
| 1-5 | 2 |
| 6-10 | 5 |
| 11-15 | 9 |
| 16-20 | 6 |
| 21-25 | 3 |
| Total | 25 |

137)




138) Set $k = 5$ because $2^5 = 32 \geq 25$.

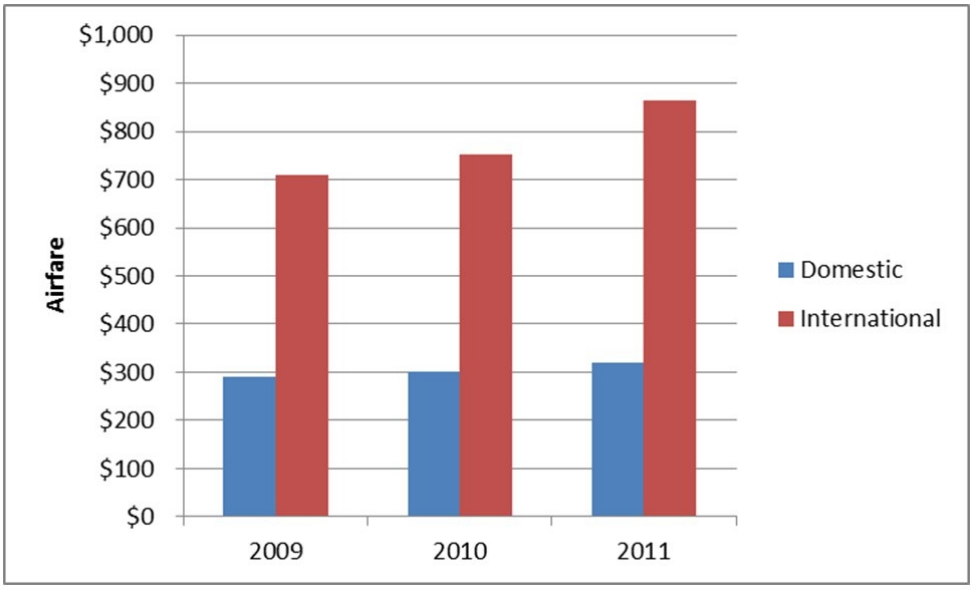
Estimated Class Width = $\frac{24 - 1}{5} = 4.6 \approx 5$

| Number of Pairs | Frequency | Relative Frequency | Cumulative Relative Frequency |
|---|---|---|---|
| 1-5 | 2 | 0.08 | 0.08 |
| 6-10 | 5 | 0.20 | 0.28 |
| 11-15 | 9 | 0.36 | 0.64 |
| 16-20 | 6 | 0.24 | 0.88 |
| 21-25 | 3 | 0.12 | 1.00 |
| Total | 25 | 1.00 | |

$P(x \leq 15) = 0.64$

139) 5 | 2 6 6 8 9
6 | 0 2 5 9
7 | 3 3 4 6 6 7 8

140)




141)

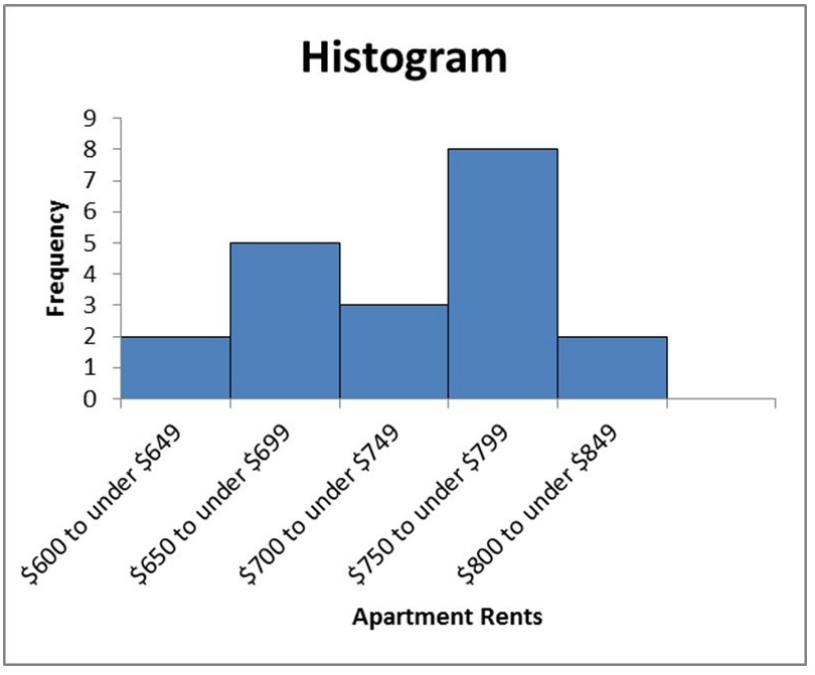
| Number of Students | Frequency | Relative Frequency |
|---|---|---|
| 0 | 18 | 0.45 |
| 1 | 10 | 0.25 |
| 2 | 6 | 0.15 |
| 3 | 4 | 0.10 |
| 4 | 2 | 0.05 |
| Total | 40 | 1.00 |

$P(x = 1) = 0.25$

142) Set $k = 5$ because $2^5 = 32 \geq 20$

Estimated Class Width = $\frac{\$840 - \$600}{5} = \$48 \approx \$50$

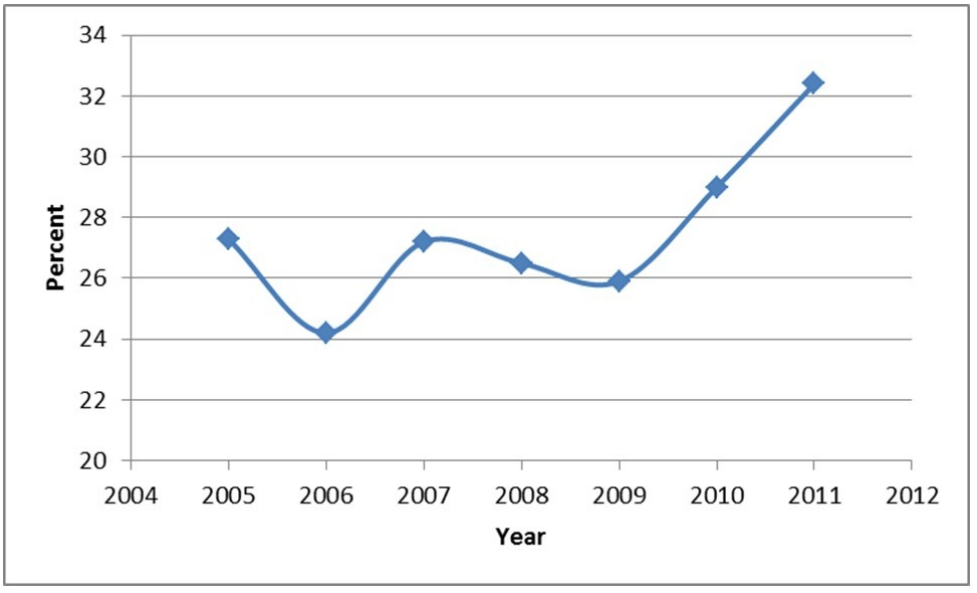
| Monthly Rent | Frequency |
|---|---|
| $600 to under $650 | 2 |
| $650 to under $700 | 5 |
| $700 to under $750 | 3 |
| $750 to under $800 | 8 |
| $800 to under $850 | 2 |
| Total | 20 |




143)

| Number of Students | Frequency |
|---|---|
| 0 | 18 |
| 1 | 10 |
| 2 | 6 |
| 3 | 4 |
| 4 | 2 |
| Total | 40 |

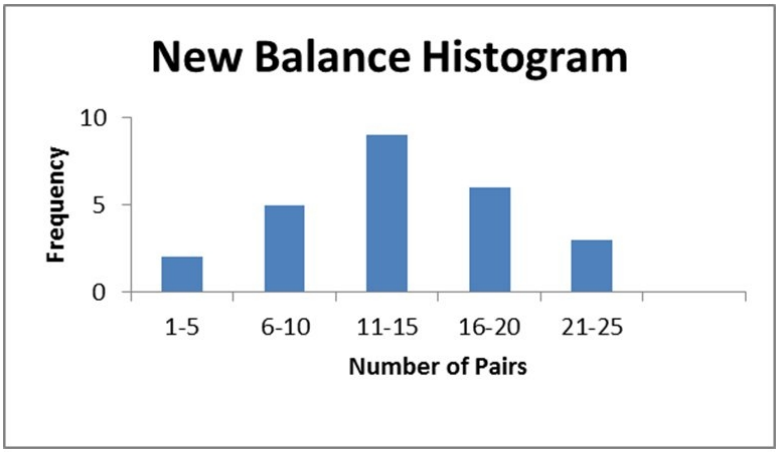
144)




145) Set $k = 5$ because $2^5 = 32 \geq 25$.

Estimated Class Width = $\frac{24 - 1}{5} = 4.6 \approx 5$

| Number of Pairs | Frequency |
|---|---|
| 1-5 | 2 |
| 6-10 | 5 |
| 11-15 | 9 |
| 16-20 | 6 |
| 21-25 | 3 |
| Total | 25 |



**Business Statistics 2nd Edition Donatelle Test Bank**
Full Download: http://alibabadownload.com/product/business-statistics-2nd-edition-donatelle-test-bank/

Answer Key
Testname: C2

146) 7(5) | 7 7
8(0) | 1 1 2 3 3 4 4
8(5) | 7 7 9
9(0) | 0 2 2 2 3 3
9(5) | 6 7



**This sample only, Download all chapters at: alibabadownload.com**