

Name _____

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

The following table contains information about moons orbiting a planet named Geo I. Use the table to solve the problem.

1)

1) _____

Moon	Average Distance from Geo I (km)	Diameter (km)	Time of Revolution (in Earth time, years)
Luna 1	2000	416	0.50
Luna 2	2600	2181	1.54
Luna 3	80,000	311	2.72
Luna 4	115,200	727	38.96
Luna 5	264,000	1143	100.32

Find the average distance from Geo I to its moon Luna 1.

A) 80,000.00 km

B) 2600 km

C) 2000 km

D) 416 km

2)

2) _____

Moon	Average Distance from Geo I (km)	Diameter (km)	Time of Revolution (in Earth time, years)
Luna 1	1000	415	0.25
Luna 2	1300	2172	0.77
Luna 3	60,000	309	1.36
Luna 4	86,400	724	29.22
Luna 5	198,000	1139	75.24

What is the time of revolution around Geo 1 of the moon Luna 4?

A) 724 years

B) 0.77 years

C) 29.22 years

D) 75.24 years

3)

3) _____

Moon	Average Distance from Geo I (km)	Diameter (km)	Time of Revolution (in Earth time, years)
Luna 1	1000	414	0.25
Luna 2	1300	2178	0.77
Luna 3	80,000	312	1.36
Luna 4	115,200	726	38.96
Luna 5	264,000	1140	100.32

Which moon has a diameter of 312 kilometers?

A) Luna 3

B) Luna 1

C) Luna 2

D) Luna 4

4)

4) _____

Moon	Average Distance from Geo I (km)	Diameter (km)	Time of Revolution (in Earth time, years)
Luna 1	1000	417	0.25
Luna 2	1300	2187	0.77
Luna 3	90,000	312	1.36
Luna 4	129,600	729	43.83
Luna 5	297,000	1146	112.86

Which moons have average distance from Geo I less than ten thousand kilometers?

- A) Luna 3, Luna 4, and Luna 5 B) None
C) Luna 1 and Luna 2 D) Luna 1 only

5)

5) _____

Moon	Average Distance from Geo I (km)	Diameter (km)	Time of Revolution (in Earth time, years)
Luna 1	2000	411	0.50
Luna 2	2600	2187	1.54
Luna 3	90,000	318	2.72
Luna 4	129,600	729	43.83
Luna 5	297,000	1140	112.86

How much further from Geo I is Luna 4 than Luna 2?

- A) 127,000 km B) 129,600 km C) 127,600 km D) 2600 km

6)

6) _____

Moon	Average Distance from Geo I (km)	Diameter (km)	Time of Revolution (in Earth time, years)
Luna 1	4000	416	1.00
Luna 2	5200	2181	3.08
Luna 3	80,000	311	5.44
Luna 4	115,200	727	38.96
Luna 5	264,000	1143	100.32

About how many Luna 3 diameters would it take to get one Luna 2 diameter?

- A) 1870 B) 3 C) 7 D) 0.14

7)

7) _____

Moon	Average Distance from Geo I (km)	Diameter (km)	Time of Revolution (in Earth time, years)
Luna 1	4000	415	1.00
Luna 2	5200	2166	3.08
Luna 3	60,000	307	5.44
Luna 4	86,400	722	29.22
Luna 5	198,000	1137	75.24

What is the median of the average distance from Geo 1 of the moons?

- A) 60,000 km B) 307 km C) 70,720 km D) 86,400 km

8)

8) _____

Moon	Average Distance from Geo I (km)	Diameter (km)	Time of Revolution (in Earth time, years)
Luna 1	3000	412	0.75
Luna 2	3900	2181	2.31
Luna 3	70,000	315	4.08
Luna 4	100,800	727	34.09
Luna 5	231,000	1139	87.78

What is the average time of revolution of the moons?

- A) 2.31 years B) 4.08 years C) 25.80 years D) 954.80 years

9)

9) _____

Moon	Average Distance from Geo I (km)	Diameter (km)	Time of Revolution (in Earth time, years)
Luna 1	1000	412	0.25
Luna 2	1300	2184	0.77
Luna 3	90,000	316	1.36
Luna 4	129,600	728	43.83
Luna 5	297,000	1140	112.86

What is the average of the diameters of the moons?

- A) 728 km B) 316 km C) 956 km D) 522 km

10)

10) _____

Moon	Average Distance from Geo I (km)	Diameter (km)	Time of Revolution (in Earth time, years)
Luna 1	4000	414	1.00
Luna 2	5200	2163	3.08
Luna 3	80,000	307	5.44
Luna 4	115,200	721	38.96
Luna 5	264,000	1135	100.32

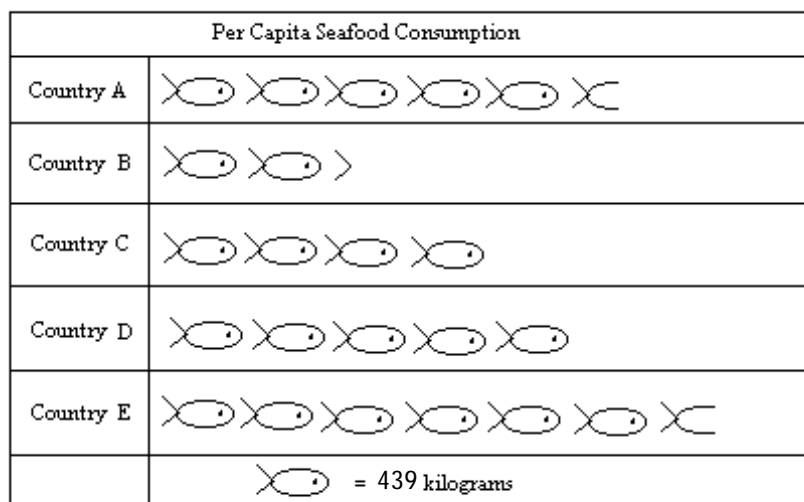
What is the mode of the diameters of the moons?

- A) 948.0 km B) 307 km
C) 721 km D) No mode exists

Use the pictograph to answer the question.

- 11) For selected countries, this pictograph shows approximately how many kilograms of seafood are consumed by each person (per capita) annually.

11) _____



Which country consumes the most seafood?

A) Country A

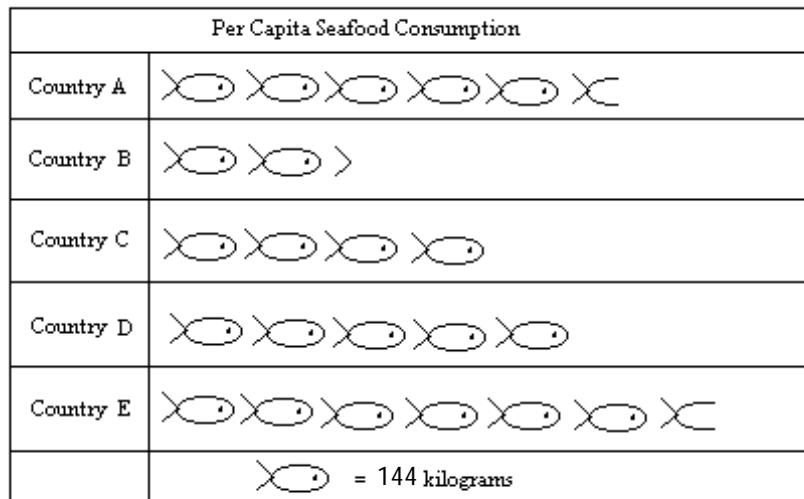
B) Country E

C) Country B

D) Country C

- 12) For selected countries, this pictograph shows approximately how many kilograms of seafood are consumed by each person (per capita) annually.

12) _____



What is the approximate seafood consumption in Country E?

A) 900 kilograms

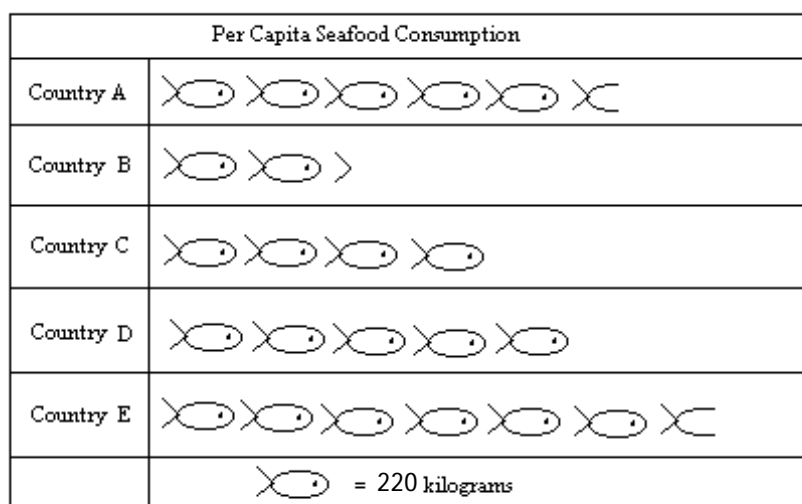
B) 972 kilograms

C) 864 kilograms

D) 1008 kilograms

- 13) For selected countries, this pictograph shows approximately how many kilograms of seafood are consumed by each person (per capita) annually.

13) _____

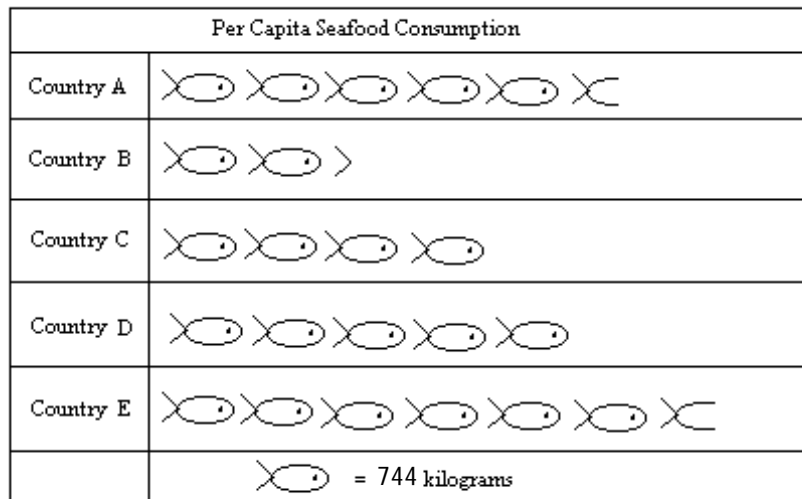


Approximately how many more kilograms of seafood is eaten per person in Country A than in Country B?

- A) 660 kilograms B) 715 kilograms C) 770 kilograms D) 550 kilograms

- 14) For selected countries, this pictograph shows approximately how many kilograms of seafood are consumed by each person (per capita) annually.

14) _____

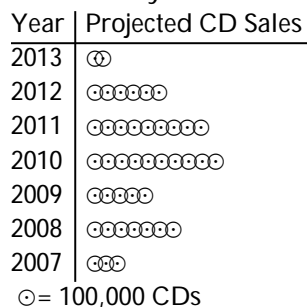


People in Country D eat approximately what percent more seafood than people in Country C?

- A) 75% B) 25% C) 125% D) 50%

- 15) This pictograph shows projected sales of compact disks (CDs) for a popular rock band for seven consecutive years.

15) _____



In which year will the greatest number of CDs be sold?

- A) Not enough information is given. B) 2008
C) 2010 D) 2013

- 16) This pictograph shows projected sales of compact disks (CDs) for a popular rock band for seven consecutive years.

16) _____

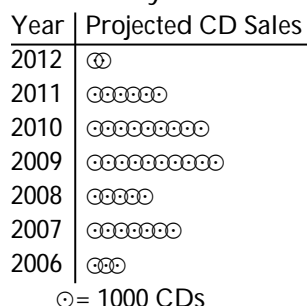


How many sales do 2 CD symbols represent?

- A) 2000 B) 2
C) Not enough information is given. D) 1000

- 17) This pictograph shows projected sales of compact disks (CDs) for a popular rock band for seven consecutive years.

17) _____

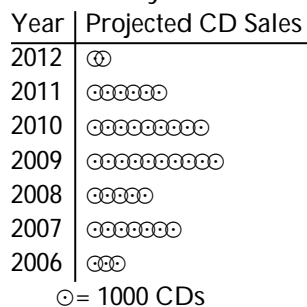


Approximately how many CDs will be sold in 2011?

- A) 6 CDs B) 6000 CDs C) 9000 CDs D) 600 CDs

- 18) This pictograph shows projected sales of compact disks (CDs) for a popular rock band for seven consecutive years.

18) _____

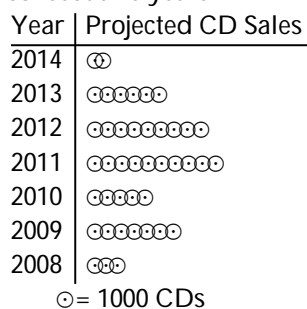


Approximately how many fewer CDs will be sold in 2008 than in 2010?

- A) 6000 CDs B) 4 CDs C) 4000 CDs D) 5000 CDs

- 19) This pictograph shows projected sales of compact disks (CDs) for a popular rock band for seven consecutive years.

19) _____

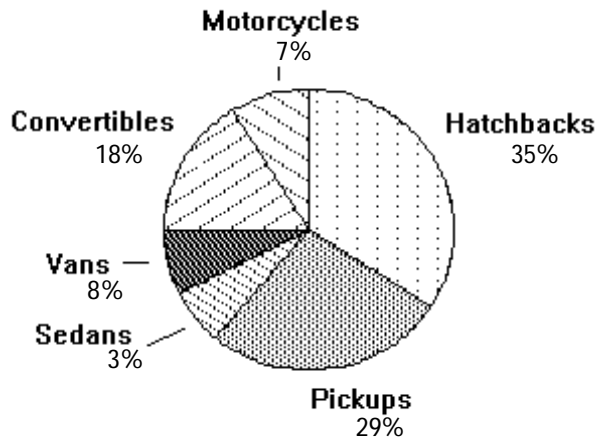


Between which two consecutive years is the greatest decline in sales indicated?

- A) Between 2009 and 2010 B) Between 2013 and 2014
C) Between 2012 and 2013 D) Between 2010 and 2011

Use the circle graph to solve the problem.

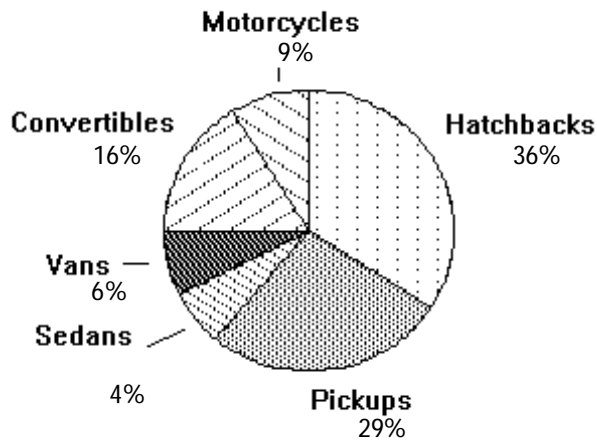
20) A survey of the 8354 vehicles on the campus of State University yielded the following circle graph. 20) _____



What percent of the vehicles are hatchbacks?

- A) 292% B) 35% C) 8% D) 29%

21) A survey of the 3356 vehicles on the campus of State University yielded the following circle graph. 21) _____

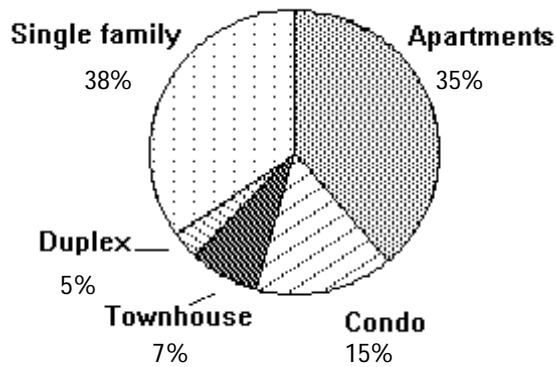


Together, what percent of the vehicles are either vans or convertibles?

- A) 96% B) 16% C) 22% D) 10%

- 22) The circle graph shows the percent of the total population of 19,800 of Springfield living in the given types of housing.

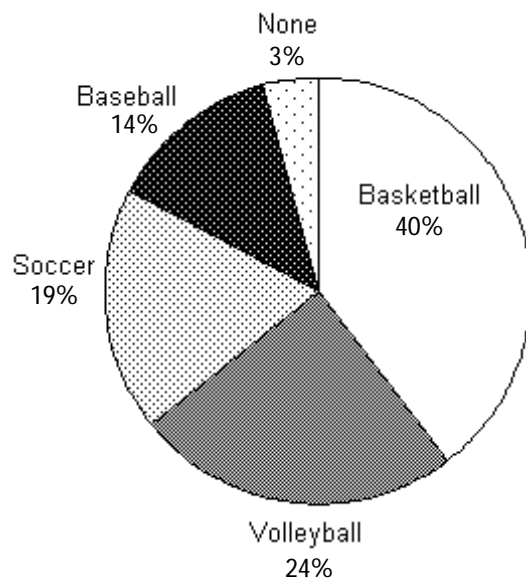
22) _____



Find the number of people who live in duplexes. Round your result to the nearest whole number.

- A) 18,810 people B) 5 people C) 990 people D) 1980 people
- 23) There are 18,000 students attending the local university. The circle graph shows the percentage of those students who attend different sporting events.

23) _____

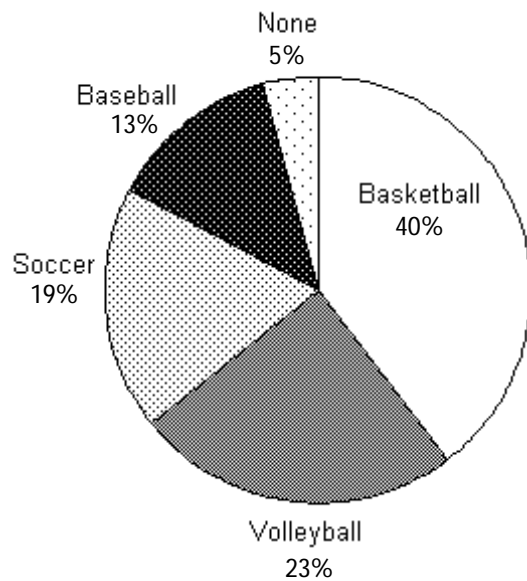


What percentage of students do not attend Soccer or Volleyball matches?

- A) 24% B) 57% C) 19% D) 43%

24) There are 6000 students attending the local university. The circle graph shows the percentage of those students who attend different sporting events.

24) _____

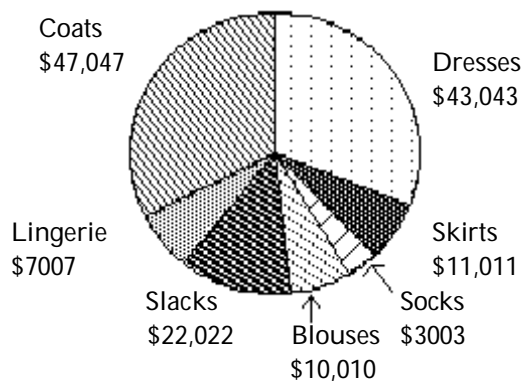


How many students attend Basketball and Baseball games?

- A) 3180 students B) 2400 students
C) 318,000 students D) 780 students

25) The circle graph below gives the inventory of the women's department of a store.

25) _____

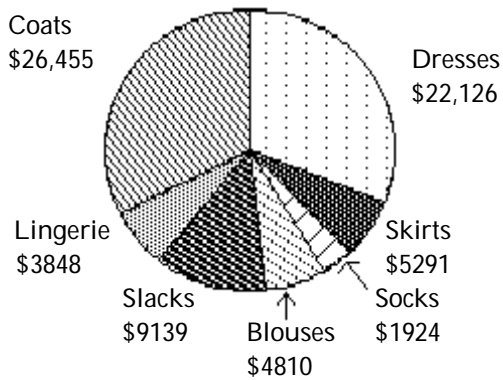


What is the total inventory?

- A) \$100,100 B) \$146,146 C) \$143,143 D) \$140,140

26) The circle graph below gives the inventory of the women's department of a store.

26) _____

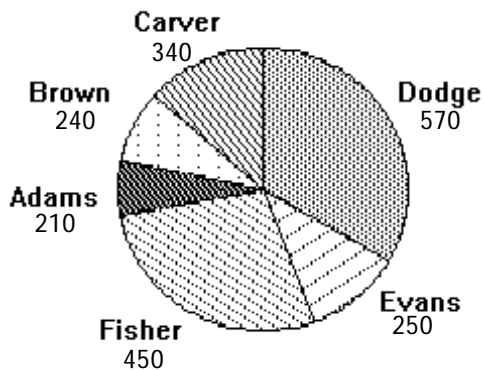


In which item of apparel does the store have the smallest investment?

- A) Socks B) Lingerie C) Coats D) Skirts

27) The circle graph below gives the number of students in the residence halls at the state university.

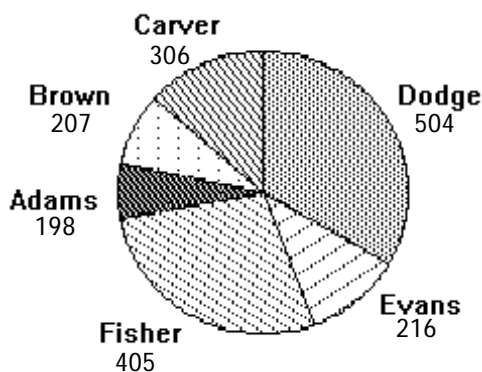
27) _____



Which residence hall has the third highest number of students?

- A) Carver B) Dodge C) Adams D) Fisher

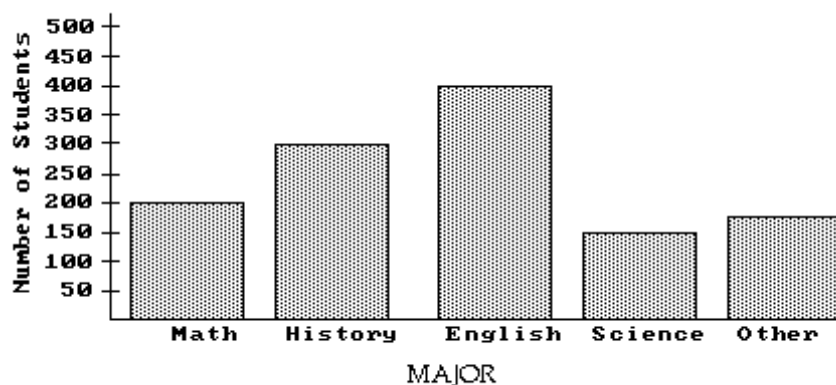
28) The circle graph below gives the number of residents in the residence halls at the state university. 28) _____



Write the ratio as a fraction in lowest terms of the number of residents at Fisher to the number of students at Brown.

- A) $\frac{15}{68}$ B) $\frac{135}{68}$ C) $\frac{45}{23}$ D) $\frac{23}{45}$

The bar graph below shows the number of students by major in the College of Arts and Sciences. Answer the question.



29) How many students are majoring in Math? 29) _____
 A) 250 B) 150 C) 200 D) 300

30) About how many students are in the College of Arts and Sciences? 30) _____
 A) 1100 B) 1225 C) 1050 D) 1325

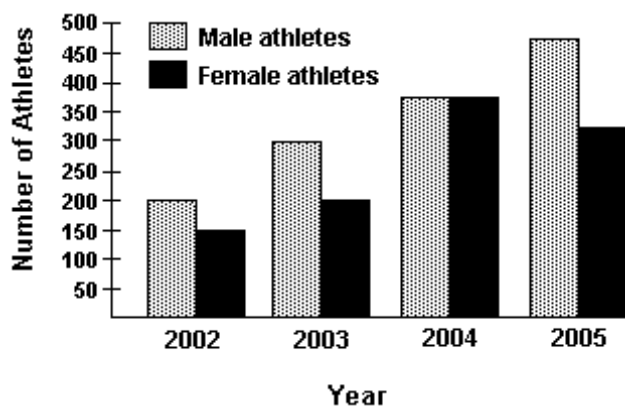
31) Which major has the largest number of students? 31) _____
 A) Math B) Science C) History D) English

32) Which major has about 150 students? 32) _____
 A) English B) History C) Science D) Math

33) How many more students are majoring in math than in science? 33) _____
 A) 10 B) 150 C) 100 D) 50

- 34) What is the average number of students taking Science, English, and Math? Round your answer to the nearest whole student if necessary. 34) _____
 A) 317 students B) 250 students C) 850 students D) 188 students
- 35) What is the median number of students taking History, Science, and Math? 35) _____
 A) 300 students B) 150 students C) 400 students D) 200 students
- 36) The science department spends about \$300 on equipment for each student majoring in science. How much should the science department budget for equipment? 36) _____
 A) \$45,000 B) \$4500 C) \$60,000 D) \$30,000
- 37) The English department assigns a counselor to each student majoring in English. Each counselor is assigned 20 students. How many counselors are needed? 37) _____
 A) 24 B) 27 C) 22 D) 20
- 38) The science department is planning to buy some new equipment. They want to make sure that there is one of the new machines for every 5 students majoring in science. If each machine costs \$450, how much should they budget for the new equipment? 38) _____
 A) \$18,000 B) \$11,250 C) \$13,500 D) \$15,750

Refer to the double-bar graph below which shows the number of male and female athletes at a university over a four-year period. Solve the problem.



- 39) Which year had the greatest number of female athletes? What was the total number of male athletes that year? 39) _____
 A) 2005; 475 athletes B) 2004; 350 athletes
 C) 2005; 325 athletes D) 2004; 375 athletes
- 40) Find the increase in the number of female athletes from 2003 to 2004. 40) _____
 A) 175 B) 125 C) 375 D) 150
- 41) Find the increase in the number of male athletes from 2004 to 2005. 41) _____
 A) 75 B) 475 C) 100 D) 50

- 42) What was the percent of decrease in the number of female athletes from 2004 to 2005? 42) _____
 A) 13.3% B) 50% C) 18.75% D) 25%
- 43) What was the percent of increase in the number of male athletes from 2002 to 2003? 43) _____
 A) 25% B) 100% C) 50% D) 75%
- 44) Which year had the same number of male and female athletes? 44) _____
 A) 2002 B) 2005 C) 2003 D) 2004
- 45) In which year did the greatest difference between the number of male athlete and female athletes occur? Find the difference. 45) _____
 A) 2005; 100 athletes B) 2005; 150 athletes
 C) 2003; 100 athletes D) 2005; 200 athletes
- 46) How many students were involved in athletics in 2003? 46) _____
 A) 400 B) 600 C) 500 D) 300
- 47) Find the increase in the number of female athletes from 2003 to 2005. 47) _____
 A) 125 B) 225 C) 150 D) 175
- 48) Find the increase in the number of male athletes from 2002 to 2004. 48) _____
 A) 175 B) 150 C) 275 D) 125

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

Construct a bar graph to represent the given data.

- 49) The following table shows the average amount spent per week on groceries by four different families with three members. 49) _____

Family	Amount Spent on Groceries
Smith	\$99.20
Harding	\$140.80
Tooley	\$118.40
Borne	\$134.40

- 50) The following table shows the number of female infants born at Hospital X on New Year's Day (Jan. 1). 50) _____

Year	No. of Female Infants Born Jan 1
200	35
201	20
202	30
203	50
204	45
205	40

- 51) The following table shows the number of male infants born at Hospital X on New Year's Day (Jan. 1). 51) _____

Year	No. of Male Infants Born Jan 1
200.3	6
201.3	14
202.3	10
203.3	16
204.3	10
205.3	10

- 52) The following table shows the number of inches of rainfall measured at City X during the following days. 52) _____

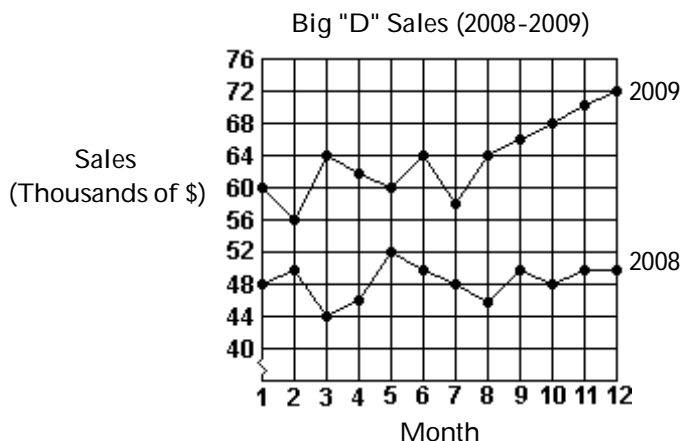
Day	No. of Inches of Rainfall
April 9	1.26
April 24	1.94
May 9	3.26
May 24	2.54
June 9	2.02
June 24	1.86

- 53) The following table shows the average number of grams of fat in various kinds of entrees served at Karma Kitchen. 53) _____

Meal	No. of Grams of Fat
Mash Hash	26.8
Barnyard Plate	25.6
Peas & Q's	20.4
Bean O'Rama	12.8
Swiss Misty	23.6
Top Roundup	18.8
Wellness Platter	4.8
Good Karma	11.6

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

Use the graph to answer the question.



- 54) Which month in 2008 had the lowest sales? 54) _____
 A) Month 3 B) Month 6 C) Month 2 D) Month 8
- 55) Which month in 2009 had the highest sales? 55) _____
 A) Month 3 B) Month 6 C) Month 12 D) Month 5
- 56) What was the increase in sales between month 5 and month 6 of 2009? 56) _____
 A) \$800 B) \$8000 C) \$4000 D) \$4
- 57) What were the total sales for the first 6 months of 2008? 57) _____
 A) \$290,000 B) \$46,000 C) \$366,000 D) \$240,000
- 58) What were the total sales for the first 6 months of 2009? 58) _____
 A) \$302,000 B) \$64,000 C) \$286,000 D) \$366,000
- 59) What were the total sales for 2008? 59) _____
 A) \$582,000 B) \$48,000 C) \$50,000 D) \$764,000
- 60) What was the total increase in sales for the first 6 months from 2008 to 2009? 60) _____
 A) \$652,000 B) \$18,000 C) \$76,000 D) \$12,000
- 61) What was the total increase in sales from 2008 to 2009? 61) _____
 A) \$1,342,000 B) \$12,000 C) \$182,000 D) \$22,000
- 62) What was the difference between the highest and lowest monthly sales in 2008? 62) _____
 A) \$2000 B) \$6000 C) \$4000 D) \$8000

- 63) What was the percent of increase in sales between month 2 and month 12 of 2009? Round your answer to the nearest tenth. 63) _____
- A) 28.6% B) 25.0% C) 22.2% D) 14.3%

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

Make a line graph of the data in the table.

- 64) The following table shows the average tuition for one semester at City X College over various years. Use time on the horizontal scale for your line graph. 64) _____

Year	Average College Tuition
1980	\$400
1981	600
1982	1000
1983	1400

- 65) The following table shows the number of computer sales made at Computer Buy over five months. Use time on the horizontal scale for your line graph. 65) _____

Month	Number of Computers Sold
1	852
2	1024
3	1244
4	2108
5	1956

- 66) The following table shows the median teacher's salary in District X over several years. Use time on the horizontal scale for your line graph. 66) _____

Year	Average Salary, in thousands
1980	\$53.3
1981	46.5
1982	42.0
1983	69.0
1984	72.8
1985	80.3

- 67) The following table gives the average cost of producing a music video over the given years. Use time on the horizontal scale for your line graph. 67) _____

Year	Production Cost, in millions
1982	\$6.3
1984	5.7
1986	4.5
1988	3.3
1990	2.4
1992	4.2
1994	9.3

- 68) The following table gives the total amount of precipitation during the given months. Use time on the horizontal scale for your line graph. 68) _____

Month	Total Precipitation, in Inches
Nov.	6.08
Dec.	10.88
Jan.	15.04
Feb.	24.16
Mar.	22.24
April	29.76
May	33.12

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

For the set of numbers, find the minimum, the maximum, and the range.

- 69) 4, 6, 11, 15, 22, 41

A) Minimum: 4;
Maximum: 41;
Range: 37

B) Minimum: 4;
Maximum: 41;
Range: 45

C) Minimum: 41;
Maximum: 4;
Range: 37

D) Minimum: 41;
Maximum: 4;
Range: 45

69) _____

- 70) 13, 18, 25, 109, 2

A) Minimum: 2;
Maximum: 109;
Range: 107

B) Minimum: 109;
Maximum: 2;
Range: 107

C) Minimum: 109;
Maximum: 13;
Range: 96

D) Minimum: 13;
Maximum: 109;
Range: 96

70) _____

- 71) 1, 3, 1, 3, 3, 1, 3, 1

A) Minimum: 1;
Maximum: 3;
Range: 2

B) Minimum: 3;
Maximum: 1;
Range: 0

C) Minimum: 3;
Maximum: 1;
Range: 2

D) Minimum: 1;
Maximum: 3;
Range: 0

71) _____

Find the mean.

- 72) 39, 47, 27, 43, 24

A) 30

B) 36

C) None

D) 39

72) _____

- 73) 43, 50, 32, 46, 29, 50, 30

A) 43

B) 35

C) 40

D) 50

73) _____

- 74) 144, 168, 210, 108, 204, 246

A) 360

B) 162

C) 180

D) 300

74) _____

- 75) 9, 9.2, 7.4, 9.2, 7.2

A) 7

B) 8.4

C) 9

D) 9.2

75) _____

- 76) 1.6, 6.8, 8.5, 2.8, 4.7
 A) 4.7 B) 6.100 C) 4.88 D) 24.40 76) _____
- 77) \$27.10, \$19.60, \$27.15, \$23.15, \$19.15
 A) \$19.36 B) \$23.15 C) \$29.04 D) \$23.23 77) _____
- 78) \$45.45, \$77.60, \$63.15, \$68.35, \$45.45
 A) \$63.15 B) \$50.00 C) \$60.00 D) \$45.45 78) _____
- Find the median for the set of numbers.
- 79) 1, 8, 16, 22, 36, 43, 47
 A) 16 B) 22 C) 25 D) 36 79) _____
- 80) 16, 27, 38, 53, 62, 72, 76
 A) 53 B) 38 C) 62 D) 49 80) _____
- 81) 90, 39, 203, 105, 256, 247, 247
 A) 247 B) 203 C) 170 D) 105 81) _____
- 82) 39, 128, 238, 232, 302, 367
 A) 186.5 B) 232 C) 235 D) 238 82) _____
- 83) 6, 2, 24, 10, 27, 47, 38, 36
 A) 27 B) 23.5 C) 25.5 D) 24 83) _____
- 84) 1.9, 6.9, 7.7, 6.7
 A) 6.8 B) 6.7 C) 6.9 D) 4.80 84) _____
- 85) \$31.72, \$46.96, \$33.45, \$41.45, \$36.05, \$39.92
 A) \$39.92 B) \$38.26 C) \$36.05 D) \$37.99 85) _____
- Find any modes that exist.
- 86) 5, 9, 91, 3, 2, 8, 87, 1, 4, 16
 A) No mode B) 8 C) 9 D) 22 86) _____
- 87) 20, 33, 46, 33, 49, 33, 49
 A) 37.6 B) 33 C) 46 D) 49 87) _____
- 88) \$81, \$34, \$32, \$34, \$29, \$81
 A) No mode B) \$34 C) \$81 D) \$81, \$34 88) _____
- 89) 104, 141, 156, 104, 188, 199, 162
 A) 141 B) 104 C) 156 D) 85 89) _____

90) 89, 25, 89, 13, 25, 29, 56, 89

A) 42.5

B) 51.9

C) 25

D) 89

90) _____

91) 7.18, 7.41, 7.56, 7.18, 7.88, 7.99, 7.62

A) 7.56

B) 7.55

C) 7.41

D) 7.18

91) _____

Solve the problem.

92) Use the frequency distribution table to find the following:

a. mean (Round to the nearest tenth, if necessary.)

b. median

c. mode

d. range

92) _____

Data Item	Frequency
90	2
91	3
92	1
93	7
94	7

A) a. 92.7

b. 93

c. 93 and 94

d. 4

B) a. 92

b. 93

c. 94

d. 4

C) a. 92.7

b. 93

c. 93

d. 4

D) a. 92

b. 93

c. 93 and 94

d. 4

For the set of numbers, find the mean, median, and any mode that exist.

93) 74, 69, 67, 63, 69, 55, 65

A) mean: 66, median: 63, mode: 74

C) mean: 66, median: 67, mode: 69

B) mean: 67, median: 66, mode: 74

D) mean: 67, median: 63, mode: 69

93) _____

94) 97, 89, 85, 85, 97, 99

A) mean: 92, median: 85, mode: 99

C) mean: 93, median: 92, mode: 97

B) mean: 92, median: 93, mode: 85 and 97

D) mean: 93, median: 93, mode: 85

94) _____

95) 92, 89, 87, 86, 95, 91

A) mean: 91, median: 86, mode: 95

C) mean: 89, median: 90, mode: no mode

B) mean: 90, median: 86, mode: 95

D) mean: 90, median: 90, mode: no mode

95) _____

96) 25, 18.8, 21, 18.8, 23.4, 17.3, 25, 16.5, 18.8, 15.3

A) mean: 20.61, median: 18.8, mode: 25

C) mean: 19.99, median: 18.8, mode: 18.8

B) mean: 20.61, median: 19.9, mode: 25

D) mean: 19.99, median: 18.8, mode: 25

96) _____

Solve the problem.

97) Jeremy's car got 240 miles (highway) on 8 gallons of gasoline. What was the mean number of miles expected per gallon?

A) 32 mpg

B) 30 mpg

C) 31 mpg

D) 29 mpg

97) _____

Given the grades of a student for one semester, find the grade point average. Assume that the grade point values are 4.0 for an A, 3.0 for a B, and so on. Round to the nearest tenth.

98)

Grades	Number of Credit Hours in Course
A	2
A	5
C	4

A) 12.0

B) 3.3

C) 2.3

D) 3.6

98) _____

99)

Grades	Number of Credit Hours in Course
A	4
A	6
C	2

A) 4.3

B) 12.7

C) 3.7

D) 4.8

99) _____

100)

Grades	Number of Credit Hours in Course
C	3
B	1
A	5
A	5

A) 2.3

B) 3.5

C) 3.7

D) 8.3

100) _____

101)

Grades	Number of Credit Hours in Course
B	5
B	1
B	5
B	4

A) 3.8

B) 11.3

C) 3.0

D) 3.6

101) _____

102)

102) _____

Grades	Number of Credit Hours in Course
B	3
B	6
A	2
C	6
D	3

A) 10.0

B) 2.5

C) 3.8

D) 1.5

103)

103) _____

Grades	Number of Credit Hours in Course
A	1
C	5
A	3
A	1
B	3

A) 4.0

B) 3.0

C) 2.0

D) 7.8

Solve the problem.

104) To get a C in history, Nandan must average 73 on four tests. Scores on the first three tests were 67, 77, and 62. What is the lowest score that Nandan can get on the last test and still receive a C?

104) _____

A) 70

B) 69

C) 13

D) 86

105) To get a B in biology, Katie must average 81 on five lab reports. Scores on the first four lab reports were 91, 76, 77, and 82. What is the lowest score that Katie can get on the last lab report and still receive a B?

105) _____

A) 82

B) 74

C) 79

D) 81

106) To get an A in biology, Fred must average 90 on six quizzes. Scores on the first five quizzes were 95, 87, 88, 95, and 95. What is the lowest score that Fred can get on the last quiz and still receive an A?

106) _____

A) 80

B) 91

C) 90

D) 92

107) Bengisu was pregnant 271 days and 264 days for her first two pregnancies. In order for Bengisu's average pregnancy to equal a national average of 267 days, how long must her third pregnancy last?

107) _____

A) 247 days

B) 266 days

C) 268 days

D) 267 days

108) Samuel consumed 2161 calories of food on Monday, 2337 calories on Tuesday, and 1820 calories on Wednesday. In order for Samuel's average calorie intake to equal a daily average of 2000 calories, how many calories of food must he consume on Thursday?

108) _____

A) 1682 calories

B) 2106 calories

C) 1755 calories

D) 2080 calories

- 109) Jackie's sisters weigh 110 lb, 144 lb, 121 lb, and 121 lb. The average female in her city weighs 135.9 lb. How much does Jackie weigh if she and her sisters have an average weight of 135.9 lb? 109) _____
- A) 183.5 lb B) 126.4 lb C) 124 lb D) 121 lb

- 110) An experiment is done to compare the germination success rates of two types of seeds. Plots containing equal numbers of each kind of seed were planted and the number of seeds that germinated within a set time limit are shown in the tables below. Which type of seed is better? 110) _____

Seed X			Seed Y		
8	2	2	2	8	5
2	8	8	5	8	5
2	5	5	5	5	2

A) Seed X B) Seed Y

- 111) An experiment is done to determine which of two cereals tastes better. Shoppers test each kind of cereal and give it a rating from 1 to 10. The results are in the two tables below. Which type of cereal is better? 111) _____

Cereal X			Cereal Y		
8	4	7	9	7	2
7	9	7	2	4	8
2	8	2	4	7	4

A) Cereal Y B) Cereal X

- 112) An experiment is done to compare the strength of two types of fishing lines. Several lengths of each type were tested and the results are in the two tables below. Which type of fishing line is better? 112) _____

Line X			Line Y		
Strength, in pounds			Strength, in pounds		
100	104	108	100	108	106
100	104	106	109	100	109
104	109	104	100	100	106

A) Line X B) Line Y

- 113) An experiment is done to compare the average fuel economy of two models of cars. Several cars of each model were tested under similar conditions. The results are in the two tables below. Which car model is better? 113) _____

Car X				Car Y			
Fuel Economy, in mpg				Fuel Economy, in mpg			
22	21	27	24	22	18	21	22
21	21	27	27	27	24	21	24
22	24	18	22	21	18	21	24

A) Car Y B) Car X

- 114) An experiment is done to determine which of two cleaners cleans better. Twelve lab technicians test each kind of cleaner and give it a rating from 1 to 10. The results are in the two tables below. Which type of cleaner is better?

114) _____

Cleaner X				Cleaner Y			
9	6	7	6	6	7	7	2
6	2	9	6	2	6	6	2
6	6	7	2	6	2	9	6

A) Cleaner X

B) Cleaner Y

- 115) An experiment is done to compare printer cartridge quality. Two kinds of printer cartridges were tested to see how many pages of text they could produce before needing to be replaced. Which type of printer cartridge is better?

115) _____

Cartridge X				Cartridge Y			
Output, in Pages				Output, in Pages			
1103	1032	1050	1299	1320	1103	1101	1299
1050	1271	1299	1103	1050	1299	1050	1346
1101	1032	1346	1050	1050	1271	1103	1320

A) Cartridge X

B) Cartridge Y

- 116) Patty experiments to see which of two breeds of sheep produces thicker wool fleeces. She raises both under similar conditions and measures the fleece thickness, in centimeters, as follows. Which type of sheep produces better wool fleece?

116) _____

Sheep Breed X				Sheep Breed Y			
Fleece Thickness, in cm				Fleece Thickness, in cm			
3.2	2.6	5.2	2.6	2.6	4.3	3.5	2.6
3.5	4.3	4.2	4.2	2.6	4.3	5.6	4.2
3.5	2.6	2.6	3.5	3.5	5.2	3.2	2.6
3.2	4.2	2.6	3.2	2.6	4.2	3.2	4.3

A) Breed Y

B) Breed X

- 117) Juan experiments to see which of two drugs helps keep lab mice from rejecting transplanted organs longer. He administers the drug to mice raised in similar conditions and measures the time, in weeks, as follows. Which drug is better?

117) _____

Drug X				Drug Y			
No. Weeks Before Rejection				No. Weeks Before Rejection			
7.24	5.96	4.27	4.11	8.84	4.27	4.27	5.96
8.84	7.17	8.74	8.84	4.27	7.17	4.11	7.24
5.96	4.27	6.63	5.96	4.11	5.96	8.74	6.63

A) Drug X

B) Drug Y

Determine the quartiles as specified.

118) The test scores of 15 students are listed below. Find the first quartile.

118) _____

43 45 50 57 60
64 66 70 72 80
85 87 90 94 95

A) 53.5

B) 57

C) 55.25

D) 58.5

119) The test scores of 19 students are listed below. Find the third quartile.

119) _____

36 45 49 53 55
56 59 61 62 65
66 70 75 78 81
85 91 92 97

A) 81

B) 15

C) 78.75

D) 79.5

120) The normal annual precipitation (in inches) is given below for 21 different U.S. cities. Find the first quartile.

120) _____

39.1 16.9 25.4 18.1 27.1 27.8 30.6
15.5 42.6 18.1 13.5 19.7 32.3 10.8
14.3 33.6 12.9 35.0 22.3 11.2 51.7

A) 14.600 in.

B) 14.90 in.

C) 14.3 in.

D) 15.5 in.

Obtain the five-number summary for the given data.

121) The test scores of 15 students are listed below.

121) _____

40 47 51 55 57
60 67 71 72 76
85 87 90 94 95

A) 40, 56, 71, 86, 95

B) 40, 54.00, 71.5, 85.5, 95

C) 40, 55, 71.5, 87, 95

D) 40, 54.00, 71, 85.5, 95

122) The weekly salaries (in dollars) of sixteen government workers are listed below.

122) _____

690 596 813 642
728 578 483 633
536 661 685 463
564 787 517 826

A) 463, 550.0, 637.5, 709, 826 dollars

B) 463, 543.00, 637.5, 718.5, 826 dollars

C) 463, 536, 633, 690, 826 dollars

D) 463, 543.00, 633, 718.5, 826 dollars

Construct a frequency distribution for the given qualitative data.

123) The blood types for 40 people who agreed to participate in a medical study were as follows.

123) _____

O A A O O AB O B A O
 A O A B O O O AB A A
 A B O A A O O B O O
 O A O O A B O O A AB

Construct a frequency distribution for the data.

A) Blood type	Frequency
O	19
A	11
B	5
AB	2

B) Blood type	Frequency
O	20
A	13
B	4
AB	3

C) Blood type	Frequency
O	18
A	14
B	5
AB	3

D) Blood type	Frequency
O	19
A	13
B	5
AB	3

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

Twenty teenagers were asked to give their current savings account balances. Use the balances shown in the list to complete the frequency distribution table.

124) 132 1234 900 3489 3156
 2148 754 2550 2377 1049
 1356 796 2289 2254 2510
 2800 1655 1089 1558 2187

124) _____

Class Intervals (Account Balances)	Tally	Class Frequency (Number of Teenagers)
\$0-\$499		
\$500-\$999		
\$1000-\$1499		
\$1500-\$1999		
\$2000-\$2499		
\$2500-\$2999		
\$3000-\$3499		

Twenty teenagers were asked to give their current savings account balances. Use the balances shown in the list to complete the frequency distribution table and construct a histogram.

125) 220 1499 560 3399 3265
 2499 591 2789 2399 1382
 1400 678 2299 2159 2999
 2890 1500 1004 1999 2148

125) _____

Class Intervals (Account Balances)	Tally	Class Frequency (Number of Teenagers)
\$0-\$499		
\$500-\$999		
\$1000-\$1499		
\$1500-\$1999		
\$2000-\$2499		
\$2500-\$2999		
\$3000-\$3499		

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

Use the two-way frequency table to solve the problem.

126) A sample of 350 students was selected and each was asked the make of their automobile (foreign or domestic) and their year in college (freshman, sophomore, junior, or senior). The results are shown in the table below.

126) _____

		Year in College				Total
		Freshman	Sophomore	Junior	Senior	
Car	Foreign	15	65	100	25	205
	Domestic	10	45	80	10	145
	Total	25	110	180	35	350

What percent of seniors drive a domestic automobile?

- A) 71.4% B) 4.3% C) 7.3% D) 28.6%

- 127) A medium-sized company characterized their employees based on the sex of the employee and their length of service to the company. The results are summarized in the table below.

127) _____

		Years Employed				
		0-5	6-10	11-20	>20	Total
Sex	Male	25	20	15	5	65
	Female	30	25	10	0	65
	Total	55	45	25	5	130

What percentage of the men have worked for the company for more than 10 years?

- A) 15.4% B) 57.7% C) 30.8% D) 66.7%

The following stem-and-leaf plot gives the heights of the 20 highest mountains in two continents. Use the plots to answer the question.

Continent X's Highest Mountains

12	7 9
13	0 4 5 6
14	1 1 3 5 5 7 8
15	6 7 9 9
16	2 8 8

Continent Y's Highest Mountains

19	2 2 3 3 4 4 5 5 6 6 7 8 8 8
20	0 1 1 2 4 5

$$12|7 = 12,700 \text{ ft}$$

$$19|2 = 19,200 \text{ ft}$$

- 128) Which of the two continents contains the highest mountain?

128) _____

- A) Continent Y B) Continent X

- 129) For which of the two continents is there a smaller range of heights in its 20 highest mountains?

129) _____

- A) Continent Y B) Continent X

- 130) Find the mean of the heights of the 20 highest mountains in Continent X.

130) _____

- A) 15,002 feet B) 14,420 feet C) 14,800 feet D) 14,650 feet

- 131) Find the mean of the heights of the 20 highest mountains in Continent Y.

131) _____

- A) 19,050 feet B) 19,720 feet C) 18,900 feet D) 18,840 feet

Construct the indicated stem-and-leaf.

- 132) The following data show the number of laps run by each participant in a marathon.

132) _____

46 65 55 43 51 48 57 30 43 49 32 56

A)

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

B)

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

133) The weights of 22 members of the varsity football team are listed below.

144 152 142 151 160 152 131 164 141 153 140
144 175 156 147 133 172 159 135 159 148 171

A)

13	1 3 5
14	0 1 2 4 4 7 8
15	1 2 2 3 6 9 9
16	0 4
17	1 2 5

B)

13	1 3 5
14	1 2 2 3 6 9 9
15	0 1 2 4 4 7 8
16	0 4
17	1 2 5

134) The normal monthly precipitation (in inches) for August is listed for 39 different U.S. cities.

3.5 1.6 2.4 3.7 4.1 3.9 1.0 3.6 1.7 0.4 3.2 4.2 4.1
4.2 3.4 3.7 2.2 1.5 4.2 3.4 2.7 4.0 2.0 0.8 3.6 3.7
0.4 3.7 2.0 3.6 3.8 1.2 4.0 3.1 0.5 3.9 0.1 3.5 3.4

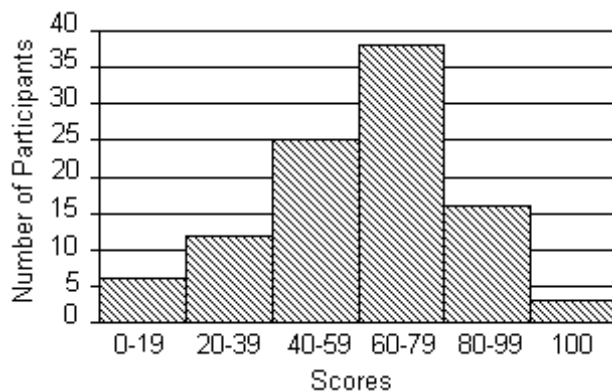
A)

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

B)

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

The histogram shows the scores of each participant in a game from a total of 100 participants.



135) How many participants scored 100?

- A) 12 participants B) 25 participants C) 6 participants D) 3 participants

135) _____

136) How many participants scored more than 19?

- A) 18 participants B) 94 participants
C) 100 participants D) 6 participants

136) _____

137) How many more participants scored 80-99 than 0-19?

- A) 16 participants B) 32 participants C) 10 participants D) 4 participants

137) _____

138) The greatest number of participants is within which category?

A) 60-69

B) 60-79

C) 40-59

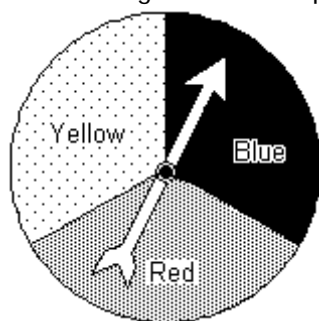
D) 80-99

138) _____

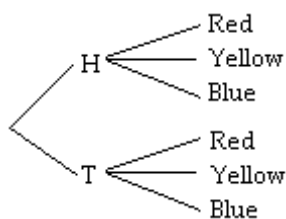
Solve the problem.

139) Draw a tree diagram for the experiment of tossing a coin once then spinning the spinner once.

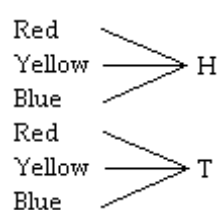
139) _____



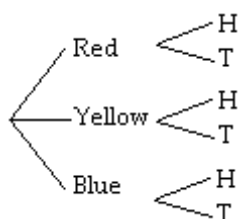
A)



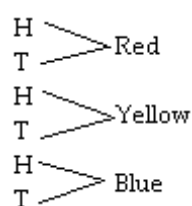
B)



C)

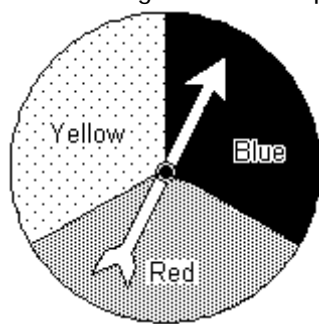


D)

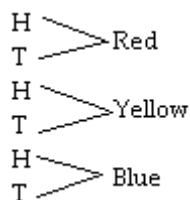


140) Draw a tree diagram for the experiment of spinning the spinner once then tossing a coin.

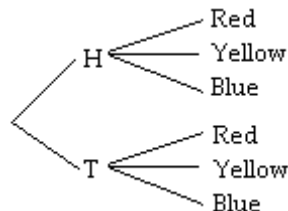
140) _____



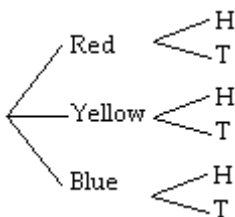
A)



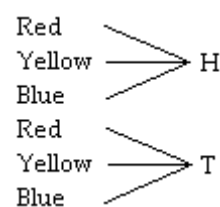
B)



C)



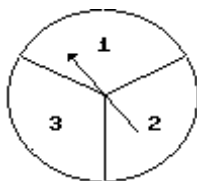
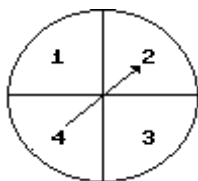
D)



Draw a tree diagram for the experiment. Then use the diagram to find the number of possible outcomes.

141) Spin the first spinner once and the second spinner once.

141) _____



A) 7

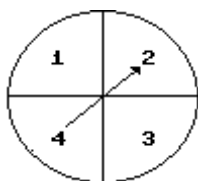
B) 16

C) 12

D) 9

142) Spin the spinner once and toss a coin.

142) _____



A) 4

B) 8

C) 6

D) 16

Find the probability of the event.

143) If a single die is tossed once, find the probability of the following event.

143) _____

A 6

A) $\frac{1}{6}$

B) 0

C) 1

D) 6

144) If a single die is tossed once, find the probability of the following event.

144) _____

A 5 or a 4 or a 3

A) $\frac{1}{3}$

B) $\frac{1}{2}$

C) $\frac{1}{6}$

D) 12

A deck of cards contains 52 cards. These cards consist of four suits - hearts, spades, clubs, and diamonds. Each suit contains one of each of the following: 2, 3, 4, 5, 6, 7, 8, 9, 10, jack, queen, king, and ace. Assume that one card is selected at random from a well-shuffled deck of cards.

145) Find the probability that the card is a queen

145) _____

A) $\frac{11}{13}$

B) $\frac{15}{52}$

C) $\frac{1}{13}$

D) $\frac{1}{52}$

146) Find the probability that the card is the 9 of hearts

146) _____

A) $\frac{1}{52}$

B) $\frac{1}{13}$

C) $\frac{4}{13}$

D) $\frac{1}{26}$

147) Find the probability that the card is a red 8.

147) _____

A) $\frac{2}{13}$

B) $\frac{1}{13}$

C) $\frac{1}{52}$

D) $\frac{1}{26}$

148) Find the probability that the card is a red card.

148) _____

A) $\frac{1}{2}$

B) $\frac{1}{4}$

C) $\frac{1}{26}$

D) $\frac{1}{52}$

149) Find the probability that the card is a 2, 3, or 5.

149) _____

A) $\frac{1}{3}$

B) $\frac{1}{4}$

C) $\frac{3}{13}$

D) $\frac{3}{52}$

150) Find the probability that the card is a hearts picture card (the jack, queen, or king of hearts).

150) _____

A) $\frac{1}{3}$

B) $\frac{1}{4}$

C) $\frac{3}{52}$

D) $\frac{3}{13}$

151) Find the probability that the card is a diamond.

151) _____

A) $\frac{1}{52}$

B) $\frac{1}{4}$

C) $\frac{1}{13}$

D) $\frac{4}{13}$

152) Find the probability that the card is not a picture card (i.e. not a jack, queen, or king).

152) _____

A) $\frac{10}{13}$

B) $\frac{1}{4}$

C) $\frac{3}{13}$

D) $\frac{49}{52}$

Find the probability of the event.

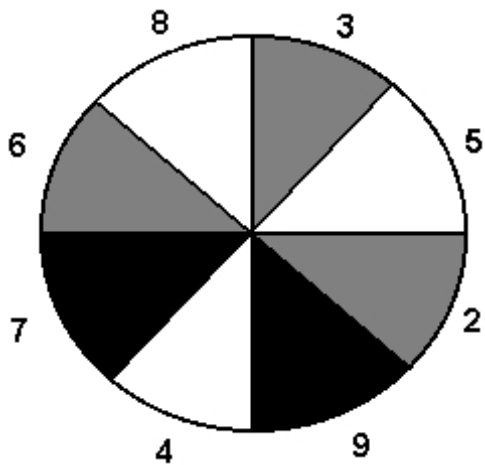
- 153) If a single die is rolled, find the probability of the following event.

153)

A number less than 2?

- A) $\frac{1}{6}$ B) $\frac{1}{9}$ C) $\frac{5}{6}$ D) $\frac{1}{3}$

A dart is thrown randomly and sticks on the circular dart board shown. Assume that all sectors are the same size and that the dart does not land on a border between shaded areas.



- 154) Find the probability that the dart lands on a white area.

154)

- A) $\frac{3}{8}$ B) $\frac{1}{2}$ C) $\frac{5}{8}$ D) $\frac{1}{4}$

- 155) Find the probability that the dart lands on the sector numbered 2.

155)

- A) $\frac{1}{4}$ B) $\frac{1}{10}$ C) $\frac{5}{8}$ D) $\frac{1}{8}$

- 156) Find the probability that the dart lands on sector number 3 or sector number 7.

156)

- A) $\frac{1}{8}$ B) $\frac{1}{5}$ C) $\frac{1}{4}$ D) $\frac{1}{2}$

- 157) Find the probability that the dart does not land on the sector numbered 3.

157)

- A) $\frac{9}{10}$ B) $\frac{7}{8}$ C) $\frac{1}{8}$ D) $\frac{3}{4}$

- 158) Find the probability that the dart lands on an area marked with a number greater than 3 and less than or equal to 7.

158)

- A) $\frac{2}{5}$ B) $\frac{5}{8}$ C) $\frac{3}{8}$ D) $\frac{1}{2}$

Answer Key

Testname: UNTITLED5

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

Answer Key

Testname: UNTITLED5

43) C

44) D

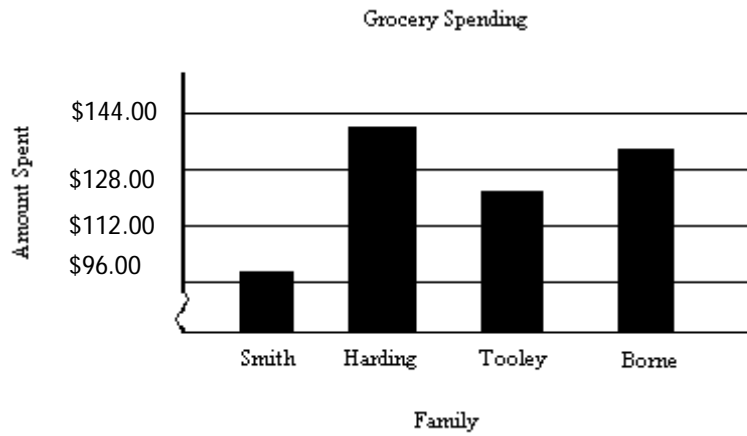
45) B

46) C

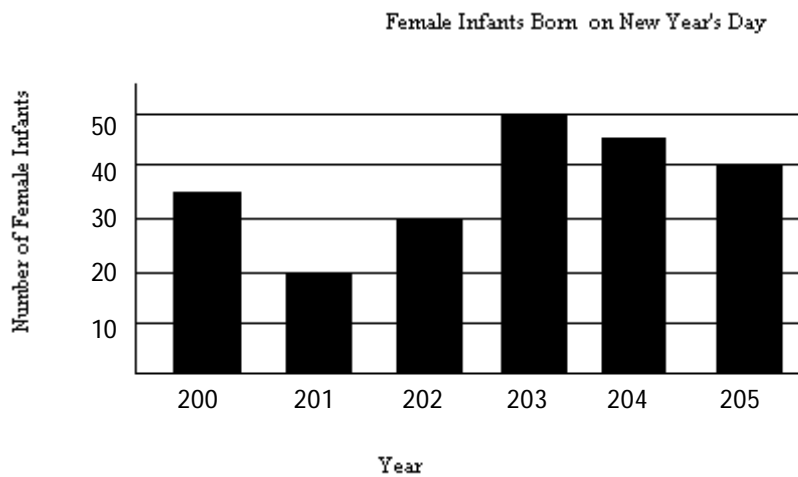
47) A

48) A

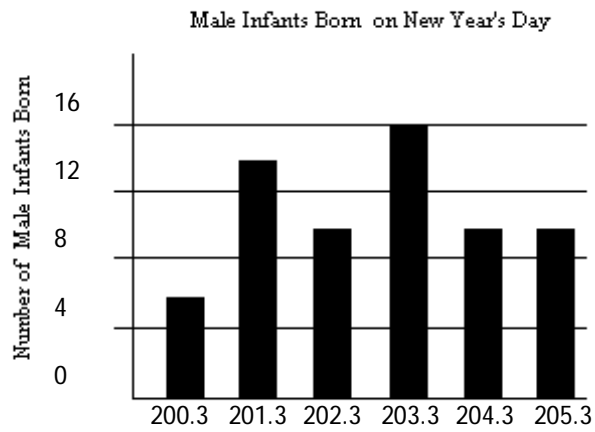
49) Answers may vary. The following is a possible answer.



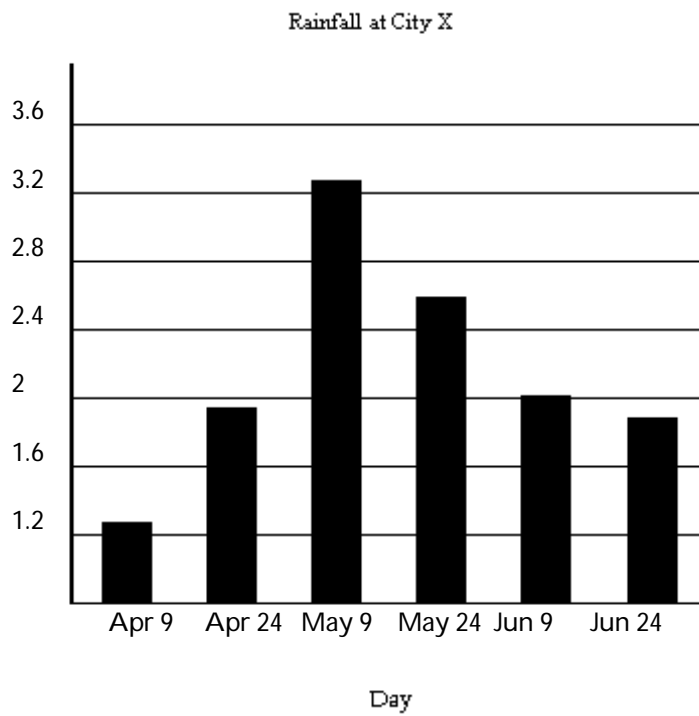
50) Answers may vary. A possible answer follows.



51) Answers may vary. A possible answer follows.



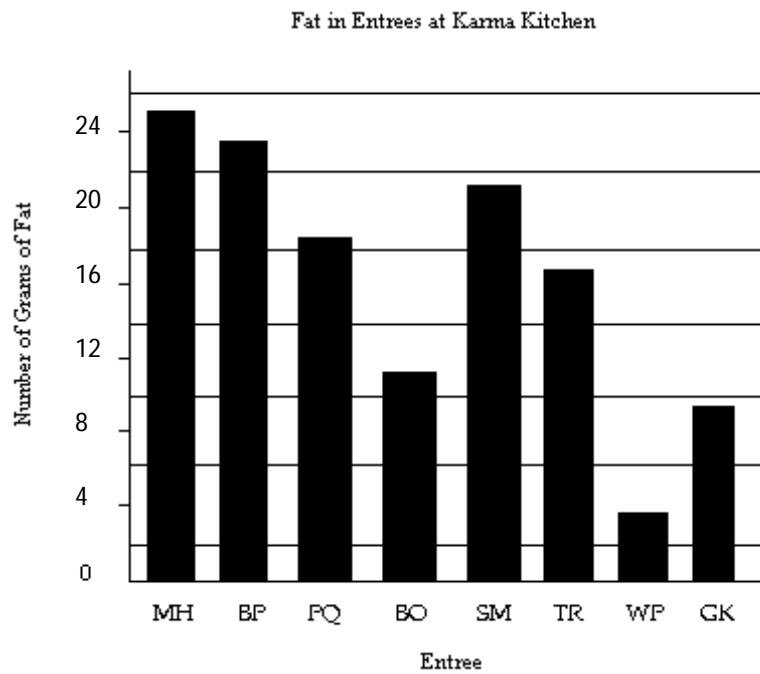
52) Answers may vary. The following is a possible answer.



Answer Key

Testname: UNTITLED5

53) Answers may vary. The following is a possible answer.



54) A

55) C

56) C

57) A

58) D

59) A

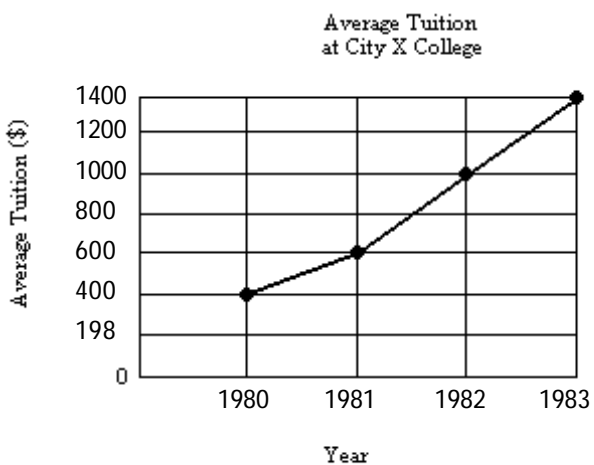
60) C

61) C

62) D

63) A

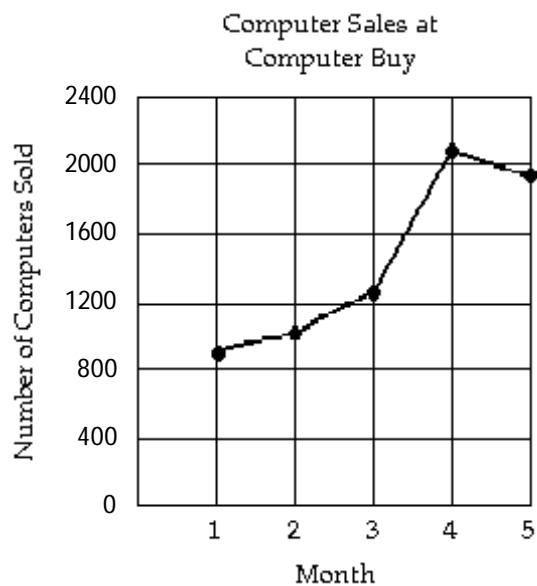
64) Answers may vary. A possible answer follows.



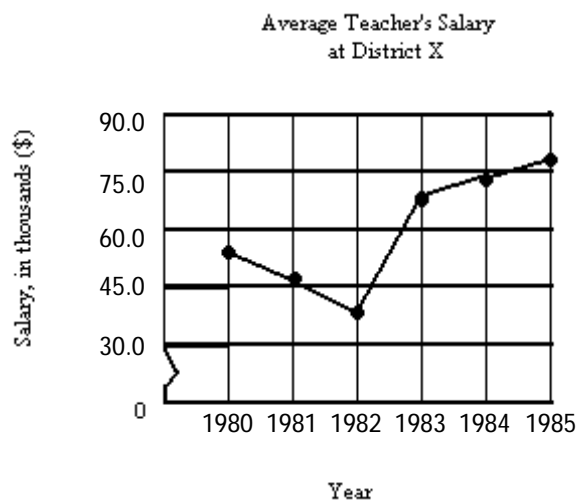
Answer Key

Testname: UNTITLED5

65) Answers may vary. A possible answer follows.



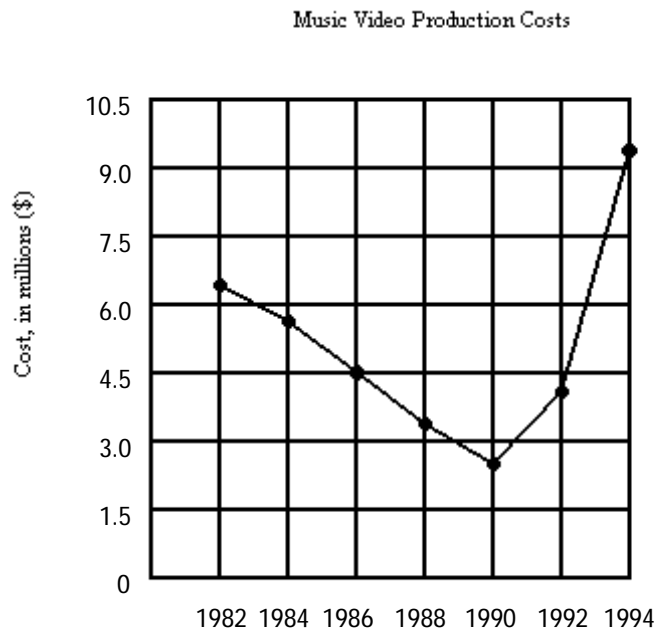
66) Answers may vary. The following is a possible answer.



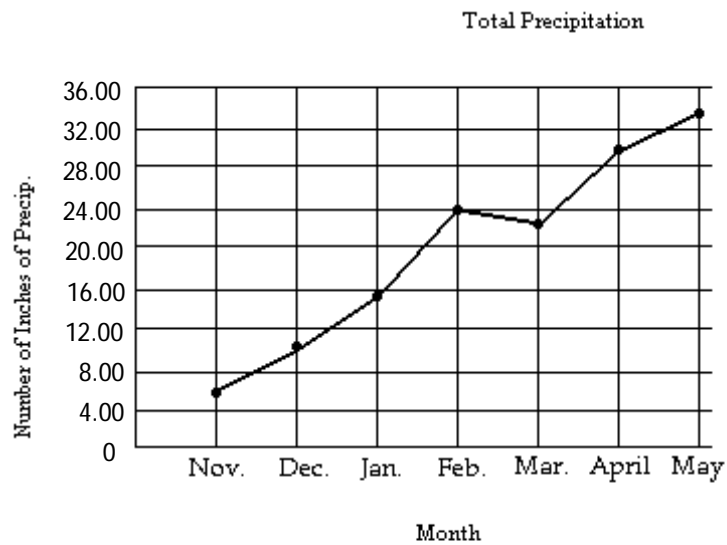
Answer Key

Testname: UNTITLED5

67) Answers may vary. A possible answer follows.



68) Answers may vary. A possible answer follows.



- 69) A
- 70) A
- 71) A
- 72) B
- 73) C
- 74) C
- 75) B

Answer Key

Testname: UNTITLED5

- 76) C
- 77) D
- 78) C
- 79) B
- 80) A
- 81) B
- 82) C
- 83) C
- 84) A
- 85) D
- 86) A
- 87) B
- 88) D
- 89) B
- 90) D
- 91) D
- 92) A
- 93) C
- 94) B
- 95) D
- 96) C
- 97) B
- 98) B
- 99) C
- 100) B
- 101) C
- 102) B
- 103) B
- 104) D
- 105) C
- 106) A
- 107) B
- 108) A
- 109) A
- 110) B
- 111) B
- 112) B
- 113) B
- 114) A
- 115) B
- 116) A
- 117) A

Answer Key

Testname: UNTITLED5

118) D

119) D

120) D

121) A

122) A

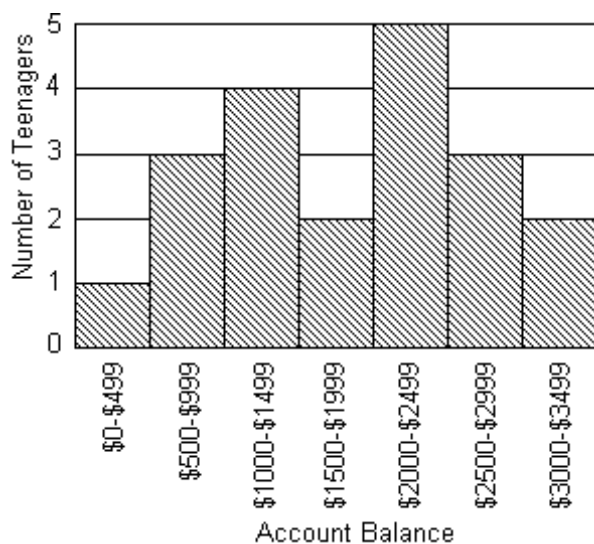
123) D

124)

Class Intervals (Account Balances)	Tally	Class Frequency (Number of Teenagers)
\$0-\$499	I	1
\$500-\$999	III	3
\$1000-\$1499	IIII	4
\$1500-\$1999	II	2
\$2000-\$2499	IIII	5
\$2500-\$2999	III	3
\$3000-\$3499	II	2

125)

Class Intervals (Account Balances)	Tally	Class Frequency (Number of Teenagers)
\$0-\$499	I	1
\$500-\$999	III	3
\$1000-\$1499	IIII	4
\$1500-\$1999	II	2
\$2000-\$2499	IIII	5
\$2500-\$2999	III	3
\$3000-\$3499	II	2



126) D

127) C

128) A

Answer Key

Testname: UNTITLED5

- 129) A
- 130) D
- 131) B
- 132) A
- 133) A
- 134) B
- 135) D
- 136) B
- 137) C
- 138) B
- 139) A
- 140) C
- 141) C
- 142) B
- 143) A
- 144) B
- 145) C
- 146) A
- 147) D
- 148) A
- 149) C
- 150) C
- 151) B
- 152) A
- 153) A
- 154) A
- 155) D
- 156) C
- 157) B
- 158) D