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

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

1) Which year had the greatest number of male athletes?
   A) 2000  B) 2001  C) 2003  D) 2002

2) Find the increase in the number of female athletes from 2000 to 2001.
   A) 75  B) 200  C) 50  D) 100

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

3) What percent of students have a major other than math, history, English, or science (to the nearest tenth of a percent)?
   A) 12.2%  B) 14.3%  C) 16.3%  D) 16.7%

4) How many students are in the College of Arts and Sciences?
   A) 1050  B) 1250  C) 1225  D) 1325
Use the line graph to answer the question.

5) Use the multiple line graph to determine who needed more time to prepare for Test 4, Jennifer or David.

![Test Preparation Time Graph]

A) David  
B) Jennifer

6) The sales figures for the Big "D" Company area shown below in a line plot.

![Big "D" Sales (2006 - 2007) Graph]

Which month in 2007 had the highest sales?
A) Month 3  
B) Month 6  
C) Month 5  
D) Month 12
7) The sales figures for the Big "D" Company area shown below in a line plot.

Which month in 2006 had the lowest sales?
A) Month 6  
B) Month 3  
C) Month 8  
D) Month 2

8) Use the multiple line graph to determine how many more hours David needed to prepare for Test 2 than Jennifer.

A) 3  
B) 4  
C) 1  
D) 2
Answer the question.

9) The following scatterplot shows heights (in inches) of children and their ages.

What type of correlation is there for this data?
A) Positive correlation  
B) Negative correlation  
C) No correlation

10) What type of correlation is there for the data shown in the scatterplot below?

A) Positive correlation  
B) Negative correlation  
C) No correlation
11) The following scatterplot displays temperatures recorded in various locations at different latitudes on a particular summer day.

![Scatterplot](image)

What type of correlation is there for this data?
A) Positive correlation  
B) Negative correlation  
C) No correlation

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

Construct the specified bar graph to illustrate the given data.

12) The Centers for Disease Control lists causes of death for individual states in 2002. The mortality data for one state is given.

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Disease</td>
<td>29.1</td>
</tr>
<tr>
<td>Cancer</td>
<td>23.4</td>
</tr>
<tr>
<td>Circulatory diseases and stroke</td>
<td>7.9</td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td>5.1</td>
</tr>
<tr>
<td>Accidents</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Create a divided bar chart for these data.

13) The following table shows the number of male infants born in a certain city on New Year's Day in various years. Create a horizontal bar graph to illustrate the data.

<table>
<thead>
<tr>
<th>Year Born New Year's Day</th>
<th>No. of Male Infants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>15</td>
</tr>
<tr>
<td>1981</td>
<td>35</td>
</tr>
<tr>
<td>1982</td>
<td>25</td>
</tr>
<tr>
<td>1983</td>
<td>40</td>
</tr>
<tr>
<td>1984</td>
<td>25</td>
</tr>
<tr>
<td>1985</td>
<td>25</td>
</tr>
</tbody>
</table>
Construct the specified histograph.
14) Lake County wanted to find the typical size of farms in their county. The data below shows the sizes (in acres) of the 84 farms located in Lake County. Create a histogram of the data using intervals that are 50 acres wide.

<table>
<thead>
<tr>
<th>Size (in acres)</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>172</td>
</tr>
<tr>
<td>50</td>
<td>63</td>
</tr>
<tr>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>400</td>
<td>142</td>
</tr>
<tr>
<td>32</td>
<td>33</td>
</tr>
<tr>
<td>88</td>
<td>66</td>
</tr>
<tr>
<td>103</td>
<td>296</td>
</tr>
<tr>
<td>73</td>
<td>48</td>
</tr>
<tr>
<td>149</td>
<td>59</td>
</tr>
<tr>
<td>21</td>
<td>130</td>
</tr>
<tr>
<td>95</td>
<td>40</td>
</tr>
<tr>
<td>19</td>
<td>199</td>
</tr>
<tr>
<td>61</td>
<td>91</td>
</tr>
<tr>
<td>182</td>
<td>73</td>
</tr>
</tbody>
</table>

Use the given data to construct a frequency table.
15) A car insurance company conducted a survey to find out how many car accidents people had been involved in. They selected a sample of 40 adults between the ages of 30 and 70 and asked each person how many accidents they had been involved in in the past ten years. The following data were obtained.

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

Construct a frequency table for the number of car accidents. Use single values for each class.

<table>
<thead>
<tr>
<th>Number of accidents</th>
<th>Frequency</th>
<th>Relative Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A medical research team studied the ages of patients who had strokes caused by stress. The ages of 34 patients who suffered stress strokes were as follows.

29 30 36 41 45 50 57 61 28 50 36 58
60 38 36 47 40 32 58 46 61 40 55 32
61 56 45 46 62 36 38 40 50 27

Construct a frequency table for these ages. Group the data into 8 equal intervals starting with the interval 25–29.

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Find the midrange for the given sample data.

17) Bill kept track of the number of hours he spent exercising each week. The results for 15 weeks are shown below. Find the midrange.

7.0 6.8 7.0 7.0 7.7
7.9 6.6 8.1 8.2 7.0
8.5 6.8 7.9 9.0 7.7

A) 7.7  B) 2.4  C) 7.80  D) 7.55

18) The speeds (in mph) of the cars passing a certain checkpoint are measured by radar. The results are shown below. Find the midrange.

44.3 41.2 42.4 40.8 43.3
40.8 44.8 41.6 44.3 42.3
44.0 41.6 40.8 44.0 41.2

A) 42.3  B) 42.80  C) 42.55  D) 4.00

19) \{49, 52, 52, 74, 67, 55, 55\}

A) 25  B) 12.5  C) 61.5  D) 53.5
Provide an appropriate response.

20) A manufacturer records the number of errors each work station makes during the week. The data are as follows:
6 3 2 3 5 2 0 2 5 4 2 0 1

Create a dot plot for this data.

A)  
B)  
C)  
D)  

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

21) Find a set of 7 scores that has the same mean but a smaller standard deviation than the set {65, 71, 77, 80, 82, 90, 96}.

22) The range and standard deviation of the data set below are 35 and 12.47 respectively.
5, 24, 25, 26, 40

If the 26 is replaced with 39, how will this affect the range? How will this affect the standard deviation? How does this illustrate one advantage of the standard deviation over the range as a measure of spread?
23) The line graph below shows the high closing values of Naristar Inc. stock from the years 1990 – 2001. x = 0 represents 1990, x = 1 represents 1991 and so on.

<table>
<thead>
<tr>
<th>Year</th>
<th>High</th>
<th>Year</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>42</td>
<td>1996</td>
<td>47</td>
</tr>
<tr>
<td>1991</td>
<td>40</td>
<td>1997</td>
<td>60</td>
</tr>
<tr>
<td>1992</td>
<td>31</td>
<td>1998</td>
<td>61</td>
</tr>
<tr>
<td>1993</td>
<td>42</td>
<td>1999</td>
<td>57</td>
</tr>
<tr>
<td>1994</td>
<td>44</td>
<td>2000</td>
<td>54</td>
</tr>
<tr>
<td>1995</td>
<td>47</td>
<td>2001</td>
<td>30</td>
</tr>
</tbody>
</table>

What would be the effect of lengthening the scale of the vertical axis? How might that influence the interpretation of the graph?

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

24) Following are box-and-whisker plots comparing the study times in hours per week for Sarah and Elaine.

What is the median study time for Sarah? for Elaine?

A) Sarah, 5 hours; Elaine, 8 hours
B) Sarah, 3 hours; Elaine, 6 hours
C) Sarah, 6 hours; Elaine, 3 hours
D) Sarah, 2 hours; Elaine, 3 hours
25) The frequency chart shows the distribution of defects for the machines used to produce a product.

<table>
<thead>
<tr>
<th>Defects</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

Create a dot plot for this data.

A) [Dot plot image]
B) [Dot plot image]
C) [Dot plot image]
D) [Dot plot image]

26) Following are box-and-whisker plots comparing the study times in hours per week for Sarah and Elaine.

What is the longest study time by either student? What is the shortest?
A) 9 hours; 0 hours
B) 2 hours; 0 hours
C) 8 hours; 2 hours
D) 9 hours; 2 hours

27) 99 employees in a factory earn a salary of $28,000 per year, while the CEO makes $766,000 annually. What are the mean and median salaries for all 100 people? Is the mean or the median the more appropriate measure of "center" in this case? Explain.

28) If Jill had test scores of 87, 92, 33, 90, 85, 96, and 94, would she prefer that the teacher used her median score or her mean score as her final grade? Explain.
29) The line graph below shows the high closing values of Naristar Inc. stock from the years 1990 – 2001. \( x = 0 \) represents 1990, \( x = 1 \) represents 1991 and so on.

<table>
<thead>
<tr>
<th>Year</th>
<th>High</th>
<th>Year</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>42</td>
<td>1996</td>
<td>47</td>
</tr>
<tr>
<td>1991</td>
<td>40</td>
<td>1997</td>
<td>60</td>
</tr>
<tr>
<td>1992</td>
<td>31</td>
<td>1998</td>
<td>61</td>
</tr>
<tr>
<td>1993</td>
<td>42</td>
<td>1999</td>
<td>57</td>
</tr>
<tr>
<td>1994</td>
<td>44</td>
<td>2000</td>
<td>54</td>
</tr>
<tr>
<td>1995</td>
<td>47</td>
<td>2001</td>
<td>30</td>
</tr>
</tbody>
</table>

What would be the effect of shortening the scale of the vertical axis? How might that influence the interpretation of the graph?

30) The graph shows the increases in a certain expenditure over a four-year period. What is wrong with the graph?
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

31) Following are box-and-whisker plots comparing the study times in hours per week for Sarah and Elaine.

What is the value of $Q_1$ for Sarah? for Elaine?
A) Sarah, 0 hours; Elaine, 2 hours  
B) Sarah, 5 hours; Elaine, 8 hours  
C) Sarah, 2 hours; Elaine, 3 hours  
D) Sarah, 3 hours; Elaine, 6 hours

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

32) Give an example of a set of ten numbers for which the mode is smaller than the median but greater than the mean.

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

33) Following are box-and-whisker plots comparing the study times in hours per week for Sarah and Elaine.

For which student(s) does the mean most likely exceed the median?
A) Sarah  
B) Elaine  
C) Both  
D) Neither
34) Given the line graph below, which of the following could you do if you wanted to convince someone that the value of the vertical variable responds sharply to small changes in the horizontal variable?
   A: lengthen the scale of the vertical axis
   B: shorten the scale of the vertical axis
   C: lengthen the scale of the horizontal axis
   D: shorten the scale of the horizontal axis

   A) A or D  B) B or C  C) A or C  D) B or D

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

35) If a constant m is added to each score in a set of scores, how will this affect the mean, median, mode, range, standard deviation, and variance?

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

36) Following are box-and-whisker plots comparing the study times in hours per week for Sarah and Elaine.

Which student has the greatest interquartile range?
   A) Elaine  B) Sarah

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

37) The mean salary of the female employees of one company is $29,525. The mean salary of the male employees of the same company is $33,470. Can the mean salary of all employees of the company be obtained by finding the mean of $29,525 and $33,470? Explain your thinking. Under what conditions would the mean of $29,525 and $33,470 yield the mean salary of all employees of the company?

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

Construct a line graph for the data.
Student Quiz Scores

<table>
<thead>
<tr>
<th>Quiz Scores</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>10–14</td>
<td>2</td>
</tr>
<tr>
<td>15–19</td>
<td>5</td>
</tr>
<tr>
<td>20–24</td>
<td>13</td>
</tr>
<tr>
<td>25–29</td>
<td>17</td>
</tr>
<tr>
<td>30–34</td>
<td>6</td>
</tr>
</tbody>
</table>

A) Score 16 20 24 28 32
   Students 18 16 14 12 10 8 6 4 2

B) Score 12 16 20 24 28 32
   Students 18 16 14 12 10 8 6 4 2

C) Score 12 16 20 24 28 32
   Students 18 16 14 12 10 8 6 4 2

D) None of the above
### Weight of Cats

<table>
<thead>
<tr>
<th>Weight (lb)</th>
<th>Number of Cats</th>
</tr>
</thead>
<tbody>
<tr>
<td>5–7</td>
<td>2</td>
</tr>
<tr>
<td>8–10</td>
<td>9</td>
</tr>
<tr>
<td>11–13</td>
<td>18</td>
</tr>
<tr>
<td>14–16</td>
<td>13</td>
</tr>
<tr>
<td>17–19</td>
<td>4</td>
</tr>
<tr>
<td>20–22</td>
<td>1</td>
</tr>
</tbody>
</table>

A) ![Graph A](image)

B) ![Graph B](image)

C) ![Graph C](image)

D) None of the above
The ages of employees of a company are summarized in the frequency table.

<table>
<thead>
<tr>
<th>Age in Years</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>18–24</td>
<td>11</td>
</tr>
<tr>
<td>25–31</td>
<td>38</td>
</tr>
<tr>
<td>32–38</td>
<td>35</td>
</tr>
<tr>
<td>39–45</td>
<td>27</td>
</tr>
<tr>
<td>46–52</td>
<td>22</td>
</tr>
<tr>
<td>53–59</td>
<td>14</td>
</tr>
<tr>
<td>60–66</td>
<td>5</td>
</tr>
</tbody>
</table>
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Write a short paragraph describing what is illustrated by the given display.

41) The circle graph shows the cause of death for one state in the year 2002.

42) The following side-by-side bar graph shows the number of male athletes and the number of female athletes at a certain college in various years.
43) The following side-by-side bar graph shows the number of male athletes and the number of female athletes at a certain college in various years.

![Bar graph showing the number of male (M) and female (F) athletes in 2000, 2001, 2002, and 2003.]

44) The circle graph shows the cause of death for one state in the year 2002.

![Circle graph showing the cause of death with categories: Accidents, Respiratory Diseases, Circulatory Diseases & Stroke, Cancer, Heart Disease, Other.]

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

Find the mean of the data.

45) The test scores of 20 students are shown below:

<table>
<thead>
<tr>
<th>Score</th>
<th>Score</th>
<th>Score</th>
<th>Score</th>
<th>Score</th>
<th>Score</th>
<th>Score</th>
<th>Score</th>
<th>Score</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td>76</td>
<td>82</td>
<td>77</td>
<td>67</td>
<td>92</td>
<td>63</td>
<td>85</td>
<td>97</td>
<td>89</td>
</tr>
<tr>
<td>79</td>
<td>71</td>
<td>50</td>
<td>91</td>
<td>85</td>
<td>77</td>
<td>85</td>
<td>79</td>
<td>18</td>
<td>89</td>
</tr>
</tbody>
</table>

Find the mean. Round to the nearest hundredth.

A) 75.85  B) 75  C) 66.80  D) 79.05

46) \{23.9, 1.3, 5, 6.9, 20, 23.9, 5, 1.3, 23.9, 23.9\}

Round to the nearest tenth.

A) 13.5  B) 15  C) 11.4  D) 23.9

47) \{-9, -3, 5, 10\}

Round to the nearest tenth.

A) 0.3  B) 0.8  C) −2.3  D) 1
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Draw a pictograph that represents the data.

48) The following chart shows Nation X's tiger population in various years.  

Use the symbol 🐯 to represent 30 tigers.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>99</td>
</tr>
<tr>
<td>1989</td>
<td>27</td>
</tr>
<tr>
<td>1988</td>
<td>66</td>
</tr>
<tr>
<td>1987</td>
<td>170</td>
</tr>
<tr>
<td>1986</td>
<td>285</td>
</tr>
<tr>
<td>1985</td>
<td>377</td>
</tr>
</tbody>
</table>

49) The following chart lists the approximate number of monarch butterfly sightings at Site A for several months.

Use the symbol 🦋 to represent 100 butterflies.

<table>
<thead>
<tr>
<th>Month</th>
<th>Sightings</th>
</tr>
</thead>
<tbody>
<tr>
<td>April</td>
<td>300</td>
</tr>
<tr>
<td>May</td>
<td>630</td>
</tr>
<tr>
<td>June</td>
<td>500</td>
</tr>
<tr>
<td>July</td>
<td>250</td>
</tr>
</tbody>
</table>

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

Calculate the interquartile range.

50) The following scores on the midterm exam in Chemistry 102 were recorded:

93  81  59  69  82  73  61  77  95  84  88  71  
86  97  63  72  89  80  60  98  91  62  78  83  
76  81  94  66  83  96

Find the interquartile range (IQR).

A) 13  B) 19  C) 15  D) 18

51) The semester point totals of 16 students are listed below. Find the interquartile range (IQR).

787  639  820  677  
475  601  531  650  
583  684  875  507  
599  460  543  490

A) 170  B) 599  C) 297  D) 161.5  E) 601
52) The weights (in pounds) of a group of high school students are listed below in a stem-and-leaf plot.

9 | 8 9
10 | 1 4 6 7 8
11 | 0 2 4 4 6 8
12 | 3 5 8 9
13 | 0 0 2 4 6 7 8 9
14 | 1 2 2 2 5 7 8
15 | 1 6 7 9

Which interval has the most students in it?
A) 90–99  B) 110–119  C) 140–149  D) 130–139

53) The weights (in pounds) of a group of high school students are listed below in a stem-and-leaf plot.

9 | 8 9
10 | 1 4 6 7 8
11 | 0 2 4 4 6 8
12 | 3 5 8 9
13 | 0 0 2 4 6 7 8 9
14 | 1 2 2 2 5 7 8
15 | 1 6 7 9

What does 12 | 5 represent on the plot?
A) 125 pounds  B) 512 pounds  C) 17 pounds  D) 60 pounds
Determine which types of display could be used to illustrate the given data.

54) Lake County wanted to find the typical size of farms in their county. The data below shows the sizes (in acres) of the 84 farms located in Lake County.

200 172 52 100 85 100
50 63 16 64 40 54
8 25 212 67 125 250
400 142 65 49 45 9
32 33 41 112 99 50
88 66 135 18 37 38
103 296 98 77 85 29
73 48 48 167 141 33
149 59 80 21 141 100
21 130 49 37 139 17
95 40 5 440 21 60
19 199 147 46 90 26
61 91 28 84 47 159
182 73 71 249 50 92

Which of the following types of display could be used to illustrate this data?
I     Stem-and-leaf plot
II   Histograph
III  Circle graph
A) II, III  B) II  C) I, II  D) All of them

55) The midterm test scores for the seventh-period typing class are listed below.
85 77 93 91 74 65 68 97 88 59 74 83 85 72 63 79

Which of the following types of display could be used to illustrate this data?
I     Histograph
II   Stem-and-Leaf Plot
III  Bar Graph
IV  Circle Graph
A) I, II  B) I, IV  C) II  D) II, III

Solve the problem.

56) Tom sleeps an average of 7.73 hours a day. In one non-leap year, how many hours does Tom sleep?
A) 2860.1 hours  B) 401.96 hours  C) 2821.45 hours  D) 2784.95 hours

57) The batting percentages of some of the players on the company softball team are .202, .330, .200, .330, .235, .301, and .272. What is the mean batting percentage of these players? Round to the nearest thousandth.
A) .243  B) .267  C) .312  D) .281

58) The five sales people at Southwest Appliances earned commissions last year of $12,000, $29,000, $48,000, $17,000, and $29,000. Find the mean commission.
A) $25,650  B) $28,350  C) $27,000  D) $29,700
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

59) Here are 3 boxplots of weekly gas prices at a service station in the United States (price in $ per gallon). Compare the distribution of prices over the three years.

60) Here are boxplots of the points scored during the first 10 games of the basketball season for both Caroline and Alexandra. Summarize the similarities and differences in their performance so far.

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

61) The six Cane brothers spent $51.05, $71.77, $61.94, $83.31, $54.23, and $69.36 on groceries. Find the mean grocery bill.
   A) $66.33  B) $97.92  C) $65.28  D) $78.33

62) Bill needs an average of 85 on four tests in science to make the honor roll. What is the lowest score he can receive on the fourth test if his first three scores are 84, 89, and 70?
   A) 97  B) 85  C) 81  D) 82
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

63) Do men and women run a 5 kilometer race at the same pace? Here are boxplots of the time (in minutes) for a race recently run in Chicago. Write a brief report discussing what these data show.

![Boxplots of 5K race times for men and women](image)

64) The data below are the gestation periods, in months, of randomly selected animals and their corresponding life spans, in years. Construct a scatter plot for the data. Determine whether there is a positive linear correlation, a negative linear correlation, or no linear correlation. Use the scatterplot to estimate the life span for an animal having a gestation period of 18 months.

<table>
<thead>
<tr>
<th>Gestation, x</th>
<th>8</th>
<th>2.1</th>
<th>1.3</th>
<th>1</th>
<th>11.5</th>
<th>5.3</th>
<th>3.8</th>
<th>24.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life span, y</td>
<td>30</td>
<td>12</td>
<td>6</td>
<td>3</td>
<td>25</td>
<td>12</td>
<td>10</td>
<td>40</td>
</tr>
</tbody>
</table>

MUltiple choice. Choose the one alternative that best completes the statement or answers the question.

65) The same car at three different dealerships had a median price of $14,833.02. The mean price was $14,544.43 and the range of prices was $1476.24. What were the three prices?
   A) $13,662.01, $14,833.02, $15,138.25
   B) $13,762.01, $14,833.02, $15,138.25
   C) $13,762.01, $14,933.02, $15,238.25
   D) $13,562.01, $14,733.02, $15,038.25

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

66) The table below shows the number of absences and the final grades of 9 randomly selected students from a statistics class. Construct a scatter plot for the data. Determine whether there is a positive linear correlation, a negative linear correlation, or no linear correlation.

<table>
<thead>
<tr>
<th>Number of absences, x</th>
<th>0</th>
<th>3</th>
<th>6</th>
<th>4</th>
<th>9</th>
<th>2</th>
<th>15</th>
<th>8</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final grade, y</td>
<td>98</td>
<td>86</td>
<td>80</td>
<td>82</td>
<td>71</td>
<td>92</td>
<td>55</td>
<td>76</td>
<td>82</td>
</tr>
</tbody>
</table>
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

67) Use the line graph to determine how many more hours were needed to prepare for Test 2 than for Test 3.

![Test Preparation Time Graph]

A) 4  B) 3  C) 1  D) 2

68) Construct a scatter plot for the given data. Determine whether there is a positive linear correlation, negative linear correlation, or no linear correlation.

<table>
<thead>
<tr>
<th>x</th>
<th>-5</th>
<th>-3</th>
<th>4</th>
<th>1</th>
<th>-1</th>
<th>-2</th>
<th>0</th>
<th>2</th>
<th>3</th>
<th>-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>y</td>
<td>11</td>
<td>-6</td>
<td>8</td>
<td>-3</td>
<td>-2</td>
<td>1</td>
<td>5</td>
<td>-5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

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

68) ______________

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

69) Use the graph to determine how many hours were needed to prepare for Test 2.

![Test Preparation Time Graph]

A) 2  B) 5  C) 3  D) 1

70) Find the standard deviation for the given data. Round your answer to one more decimal place than the original data.

70) {2, 5, 47, 11, 13, 48, 39, 36}

A) 24.5  B) 25.1  C) 18  D) 324.9

71) {4, 7, 26, 23, 45, 43}

A) 24.7  B) 248.9  C) 24.5  D) 15.8
72) [9, 7, 13, 24, 32, 45, 47]  
   A) 15.4  
   B) 236.8  
   C) 24  
   D) 25.3

Find the range of the data set.

73) [15, 17, 14, 26, 35, 16]  
   A) 25  
   B) 12  
   C) 50  
   D) 20

74) [579, 363, 512, 429, 167]  
   A) 373  
   B) 363  
   C) 412  
   D) 167

75) [35, 21, 64, 73, 52, 72]  
   A) 20  
   B) 94  
   C) 52  
   D) 47

Find the median for the given sample data.

76) {22.9, 0.5, 2, 3.3, 10, 22.9, 2, 0.5, 22.9, 22.9}  
   A) 11  
   B) 6.65  
   C) 10  
   D) 7.7

77) {3, 4, 9, 10, 15}  
   A) 7.2  
   B) 8.2  
   C) 9  
   D) 6.5

78) {84, 36, 224, 143, 278, 241, 238}  
   A) 143  
   B) 238  
   C) 178  
   D) 224

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

Identify the misuse or misrepresentation of statistics.

79) 60% of those attending the folk festival said that they prefer to buy organic food. So, most Americans prefer to buy organic food.

80) According to a survey, jazz music is the most popular music.

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

Find the variance for the given data. Round your answer to one more decimal place than the original data.

81) [1, 16, 8, 17, 12]  
   A) 42.7  
   B) 34.2  
   C) 67.0  
   D) 42.6

82) [13, 1, 17, 11, 14]  
   A) 29.8  
   B) 37.1  
   C) 37.2  
   D) 63.3

83) {-2, -2, 11, -7, 3}  
   A) 46.2  
   B) 46.3  
   C) 46.4  
   D) 37.0
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Use the given data to construct a stem-and-leaf plot.

84) The following data consists of the weights (in pounds) of 15 randomly selected women and the weights of 15 randomly selected men. Construct a back-to-back stem-and-leaf plot for the data.

Women:  128 150 118 166 142
122 137 110 175 152
145 126 139 111 170

Men:   140 153 199 186 169
136 176 162 196 155
173 190 141 166 153

85) The diastolic blood pressures for a sample of patients at a clinic were as follows. The values are in mmHg.

78  87  91  85  97  102  73  90  110  105
94  85  81  95  77  106  84  111  83  92
79  81  96  88  100  85  89  101  83  120
88  95  78  74  105  85  87  92  114  83

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

Find the mode for the given data.

86) {1, 3, 4, 10, 14}
A) none  B) 3  C) 6.4  D) 4

87) Find the mode of these downtime hours:
18, 4, 5, 8, 11, 18, 5, 18
A) two modes 5 and 18  B) none
C) 9.5  D) 18

88) {1, 10, 14, 20, 10}
A) 14  B) 10  C) 11.3  D) none
Which of the following displays is/are appropriate for these data? (More than one display may be appropriate.)

89) The Centers for Disease Control lists causes of death for individual states in 2002. The mortality data for one state is given.

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Disease</td>
<td>29.9</td>
</tr>
<tr>
<td>Cancer</td>
<td>22.7</td>
</tr>
<tr>
<td>Circulatory diseases and stroke</td>
<td>7.3</td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td>5.2</td>
</tr>
<tr>
<td>Accidents</td>
<td>4.6</td>
</tr>
</tbody>
</table>

A) I, II, III  
B) I, II  
C) II, III  
D) I
The Centers for Disease Control lists causes of death for individual states in 2002. The mortality data for one state is given.

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Disease</td>
<td>28.3</td>
</tr>
<tr>
<td>Cancer</td>
<td>22.5</td>
</tr>
<tr>
<td>Circulatory diseases and stroke</td>
<td>7.4</td>
</tr>
<tr>
<td>Respiratory diseases</td>
<td>5.2</td>
</tr>
<tr>
<td>Accidents</td>
<td>4.5</td>
</tr>
</tbody>
</table>

A) I, II  
B) I, II, III  
C) I  
D) None are appropriate.

Construct a circle graph for the given data.

The following figures give the economic distribution for 16,000 residents of a certain city.

<table>
<thead>
<tr>
<th>Income Category</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower</td>
<td>4800</td>
</tr>
<tr>
<td>Middle</td>
<td>9600</td>
</tr>
<tr>
<td>Upper</td>
<td>1600</td>
</tr>
</tbody>
</table>
92) The frequency table gives the distribution of the types of houses in an East Coast town.

<table>
<thead>
<tr>
<th>House Type</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cape</td>
<td>11,000</td>
</tr>
<tr>
<td>Garrison</td>
<td>15,400</td>
</tr>
<tr>
<td>Split</td>
<td>17,600</td>
</tr>
</tbody>
</table>

Use the given data to construct a line graph.

93) The data in the table represent production figures for the United States.

**Cotton, 1970–1976**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bushels (millions)</td>
<td>10.2</td>
<td>10.5</td>
<td>13.7</td>
<td>13.0</td>
<td>11.5</td>
<td>8.3</td>
<td>10.6</td>
</tr>
</tbody>
</table>

94) The data in the table represent production figures for the United States.

**Canned Fruit, 1970–1977**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases (millions)</td>
<td>106.5</td>
<td>97.7</td>
<td>84.8</td>
<td>96.1</td>
<td>101.5</td>
<td>90.2</td>
<td>88.5</td>
<td>90.8</td>
</tr>
</tbody>
</table>

95) The data in the table represent production figures for the United States.

**Rice, 1970–1976**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bushels (millions)</td>
<td>84</td>
<td>86</td>
<td>87</td>
<td>93</td>
<td>102</td>
<td>128</td>
<td>116</td>
</tr>
</tbody>
</table>

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

Use the circle graph to solve the problem.

96) In a school survey, students showed these preferences for instructional materials.

![Circle Graph]

About how many students would you expect to prefer written materials in a school of 450 students?

A) About 162  
B) About 81  
C) About 41  
D) About 9
97) A survey of the 9438 vehicles on the campus of State University yielded the following circle graph.

Motorcycles
9%
Convertibles
16%
Vans
7%
Sedans
4%
Hatchbacks
35%
Pickups
29%

Find the number of convertibles. Round your result to the nearest whole number.
A) 7928  B) 1510  C) 1982  D) 16

98) Construct a box-and-whisker plot for the set of data.
98) \{5, 3, 10, 12, 8, 18, 5, 10, 4, 15, 6, 4\}
A)

\[\text{Box-and-whisker plot}\]

B)

\[\text{Box-and-whisker plot}\]

C)

\[\text{Box-and-whisker plot}\]

D)

\[\text{Box-and-whisker plot}\]
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Construct the specified histogram.

100) The frequency table below shows the number of days off in a given year for 30 police detectives.

<table>
<thead>
<tr>
<th>Days off</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>10</td>
</tr>
<tr>
<td>2-3</td>
<td>1</td>
</tr>
<tr>
<td>4-5</td>
<td>7</td>
</tr>
<tr>
<td>6-7</td>
<td>7</td>
</tr>
<tr>
<td>8-9</td>
<td>1</td>
</tr>
<tr>
<td>10-11</td>
<td>4</td>
</tr>
</tbody>
</table>

Construct a histogram.
Answer Key
Testname: 3180-UNIT-3-PRACTICE TEST

1) C
   Objective: (8.1) Solve Apps: Use Side-by-Side Bar Graph

2) C
   Objective: (8.1) Solve Apps: Use Side-by-Side Bar Graph

3) B
   Objective: (8.1) Solve Apps: Use Bar Graph

4) C
   Objective: (8.1) Solve Apps: Use Bar Graph

5) A
   Objective: (8.2) Solve Apps: Interpret Multiple Line Graph

6) D
   Objective: (8.2) Solve Apps: Interpret Multiple Line Graph

7) B
   Objective: (8.2) Solve Apps: Interpret Multiple Line Graph

8) D
   Objective: (8.2) Solve Apps: Interpret Multiple Line Graph

9) A
   Objective: (8.2) Interpret Scatterplot

10) C
    Objective: (8.2) Interpret Scatterplot

11) B
    Objective: (8.2) Interpret Scatterplot

12) Objective: (8.1) *Construct Bar Graph

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

```
<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Male Infants Born</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>10</td>
</tr>
<tr>
<td>1981</td>
<td>20</td>
</tr>
<tr>
<td>1982</td>
<td>30</td>
</tr>
<tr>
<td>1983</td>
<td>40</td>
</tr>
<tr>
<td>1984</td>
<td>15</td>
</tr>
<tr>
<td>1985</td>
<td>20</td>
</tr>
</tbody>
</table>
```

14) Objective: (8.1) *Construct Bar Graph

15) Objective: (8.1) *Construct Frequency Distribution Given Data

<table>
<thead>
<tr>
<th>Number of accidents</th>
<th>Frequency</th>
<th>Relative Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>13</td>
<td>32.5%</td>
</tr>
<tr>
<td>1</td>
<td>12</td>
<td>30%</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>15%</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>10%</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>7.5%</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>5%</td>
</tr>
</tbody>
</table>
16) | Age | Frequency | Relative Frequency |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>25 - 29</td>
<td>3</td>
<td>3/34</td>
</tr>
<tr>
<td>30 - 34</td>
<td>3</td>
<td>3/34</td>
</tr>
<tr>
<td>35 - 39</td>
<td>6</td>
<td>6/34</td>
</tr>
<tr>
<td>40 - 44</td>
<td>4</td>
<td>4/34</td>
</tr>
<tr>
<td>45 - 49</td>
<td>5</td>
<td>5/34</td>
</tr>
<tr>
<td>50 - 54</td>
<td>3</td>
<td>3/34</td>
</tr>
<tr>
<td>55 - 59</td>
<td>5</td>
<td>5/34</td>
</tr>
<tr>
<td>60 - 64</td>
<td>5</td>
<td>5/34</td>
</tr>
</tbody>
</table>

Objective: (8.1) *Construct Frequency Distribution Given Data

17) C
   Objective: (8.3) Find Midrange

18) B
    Objective: (8.3) Find Midrange

19) C
    Objective: (8.3) Find Midrange

20) B
    Objective: (8.1) Create or Interpret Dot Plot

21) Answers will vary.
    Objective: (8.3) *Know Concepts: Average and Spread II

22) Answers will vary. Possible answer: The range will be unaffected, while the standard deviation will increase. The standard deviation is often preferable as it takes all observations into account while the range depends only on the smallest and largest observations and disregards other observations.
    Objective: (8.3) *Know Concepts: Average and Spread II

23) Lengthening the scale of the vertical axis emphasizes changes in the vertical variable - the closing value of the stock. Each line segment would be steeper suggesting a larger change (increase or decrease) in the value of the stock for the year.
    Objective: (8.2) *Know Concepts: Displays That Show Relationships

24) B
    Objective: (8.3) Solve Apps: Use Box-and-Whisker Plots

25) B
    Objective: (8.1) Create or Interpret Dot Plot

26) A
    Objective: (8.3) Solve Apps: Use Box-and-Whisker Plots

27) Mean: $35,380; median: $28,000
    In this case, the median is more representative of the majority of the salaries. The salary of the CEO is an outlier - an extreme value compared to the other 99 salaries. The mean is affected by outliers since it takes into consideration every numerical value. In this case the mean is "pulled up" by the one very large salary. The median is not affected by outliers.
    Objective: (8.3) *Know Concepts: Average and Spread I

28) It would be better for Jill if the teacher used her median score (90) as this would be unaffected by her one unusually low score of 33. The mean is sensitive to outliers and would be "pulled down" by the unusually low score. The mean score in this case is 82.4 which is not so representative of the majority of Jill's scores.
    Objective: (8.3) *Know Concepts: Average and Spread I

29) Shortening the scale of the vertical axis de-emphasizes changes in the vertical variable - the closing value of the stock. Each line segment would be less steep suggesting a smaller change (increase or decrease) in the value of the stock for the year.
    Objective: (8.2) *Know Concepts: Displays That Show Relationships

30) The bars are not drawn in the correct proportions.
    Objective: (8.4) *Identify Misuse of Graph

31) C
    Objective: (8.3) Solve Apps: Use Box-and-Whisker Plots

32) Answers will vary.
    Objective: (8.3) *Know Concepts: Average and Spread II

33) A
    Objective: (8.3) Solve Apps: Use Box-and-Whisker Plots

34) A
    Objective: (8.2) *Know Concepts: Displays That Show Relationships

35) The mean, median, and mode will increase by m. The range, standard deviation, and variance will be unaffected.
    Objective: (8.3) *Know Concepts: Average and Spread II

36) A
    Objective: (8.3) Solve Apps: Use Box-and-Whisker Plots
37) In general, the mean salary of all employees of the company cannot be obtained by finding the mean of $29,525 and $33,470 because each of these means has been obtained by averaging a different number of salaries. The mean of $29,525 and $33,470 will yield the mean salary of all employees of the company only if the number of female employees is equal to the number of male employees.

Objective: (8.3) *Know Concepts: Average and Spread I

38) B
Objective: (8.2) Solve Apps: Construct Line Graph II

39) B
Objective: (8.2) Solve Apps: Construct Line Graph II

40) C
Objective: (8.2) Solve Apps: Construct Line Graph II

41) Answers will vary. Possible answer: The category "other" is quite large indicating that a substantial percentage (roughly 33%) of people died of a cause other than heart disease, cancer, circulatory diseases, respiratory diseases, and accidents. Heart disease is the most common cause of death, and cancer is the second most common cause. Together these two causes account for a little more than 50% of deaths. Other causes are much less common, with circulatory diseases and stroke being the third most common category.

Objective: (8.4) *Interpret Visual Display

42) Answers will vary. Possible answer: In all of the years other than 2002, there are more male athletes than female athletes. In 2002 the number of male athletes is equal to the number of female athletes. The number of male athletes increased steadily over the four-year period. The number of female athletes increased from 2000 to 2001 and from 2001 to 2002, but decreased again in 2003.

Objective: (8.4) *Interpret Visual Display

43) Answers will vary. Possible answer: In all of the years other than 2002, there are more male athletes than female athletes. In 2002 the number of male athletes is equal to the number of female athletes. The number of male athletes increased steadily over the four-year period. The number of female athletes increased from 2000 to 2001 and from 2001 to 2002, but decreased again in 2003.

Objective: (8.1) *Interpret Display

44) Answers will vary. Possible answer: The category "other" is quite large indicating that a substantial percentage (roughly 33%) of people died of a cause other than heart disease, cancer, circulatory diseases, respiratory diseases, and accidents. Heart disease is the most common cause of death, and cancer is the second most common cause. Together these two causes account for a little more than 50% of deaths. Other causes are much less common, with circulatory diseases and stroke being the third most common category.

Objective: (8.1) *Interpret Display

45) A
Objective: (8.3) Find Mean

46) A
Objective: (8.3) Find Mean

47) B
Objective: (8.3) Find Mean

48) | Year | Tiger Population of Nation X |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>🐯 🐯 🐯 🐯</td>
</tr>
<tr>
<td>1989</td>
<td>🐯</td>
</tr>
<tr>
<td>1988</td>
<td>🐯 🐯</td>
</tr>
<tr>
<td>1987</td>
<td>🐯 🐯 🐯 🐯</td>
</tr>
<tr>
<td>1986</td>
<td>🐯 🐯 🐯 🐯 🐯 🐯</td>
</tr>
<tr>
<td>1985</td>
<td>🐯 🐯 🐯 🐯 🐯 🐯 🐯 🐯</td>
</tr>
</tbody>
</table>

= 30 tigers
Objective: (8.1) *Construct Pictograph
49) 

<table>
<thead>
<tr>
<th>Month</th>
<th>Monarch Butterfly Sightings at Site A</th>
</tr>
</thead>
<tbody>
<tr>
<td>April</td>
<td><img src="image1" alt="Butterflies" /></td>
</tr>
<tr>
<td>May</td>
<td><img src="image2" alt="Butterflies" /></td>
</tr>
<tr>
<td>June</td>
<td><img src="image3" alt="Butterflies" /></td>
</tr>
<tr>
<td>July</td>
<td><img src="image4" alt="Butterflies" /></td>
</tr>
</tbody>
</table>

= 100 butterflies

Objective: (8.1) *Construct Pictograph

50) D
Objective: (8.3) Find Interquartile Range

51) D
Objective: (8.3) Find Interquartile Range

52) D
Objective: (8.1) Solve Apps: Use Stem-and-Leaf Plot

53) A
Objective: (8.1) Solve Apps: Use Stem-and-Leaf Plot

54) C
Objective: (8.1) Determine Appropriate Display

55) A
Objective: (8.1) Determine Appropriate Display

56) C
Objective: (8.3) Solve Apps: Use Mean/Range/Median

57) B
Objective: (8.3) Solve Apps: Find Mean

58) C
Objective: (8.3) Solve Apps: Find Mean

59) Gas price have been increasing on average over the 3-year period. The interquartile range has decreased over the 3-year period but the range has increased. Over the 3-year period, the distribution of prices has become increasingly skewed to the right, with the distribution in 2005 being the most strongly skewed. In 2005 there are three outliers.
Objective: (8.3) *Use Boxplots to Compare Distributions

60) Both girls have a median score of about 18 points per game. Caroline is much more consistent, because her IQR is about 4 points, while Alexandra’s is over 15.
Objective: (8.3) *Use Boxplots to Compare Distributions

61) C
Objective: (8.3) Solve Apps: Find Mean

62) A
Objective: (8.3) Solve Apps: Use Mean/Range/Median

63) Overall, men appear to run about 3 minutes faster than women, but the two distributions are very similar in shape and spread. Both distributions are skewed to the right – the times larger than the median are further from the median than the times smaller than the median.
Objective: (8.3) *Use Boxplots to Compare Distributions

64) There appears to be a positive linear correlation.

Estimated life span for an animal having a gestation period of 18 months is about 35 years.
Objective: (8.2) *Solve Apps: Construct/Use Scatterplot

65) A
Objective: (8.3) Solve Apps: Use Mean/Range/Median
Answer Key
Testname: 3180-UNIT-3-PRACTICE TEST

66) There appears to be strong negative correlation.
   Objective: (8.2) *Solve Apps: Construct/Use Scatterplot

67) D
   Objective: (8.2) Solve Apps: Interpret Line Graph

68) 
   There appears to be no linear correlation.
   Objective: (8.2) *Solve Apps: Construct/Use Scatterplot

69) C
   Objective: (8.2) Solve Apps: Interpret Line Graph

70) C
   Objective: (8.3) Find Standard Deviation

71) D
   Objective: (8.3) Find Standard Deviation

72) A
   Objective: (8.3) Find Standard Deviation

73) D
   Objective: (8.3) Find Range

74) C
   Objective: (8.3) Find Range

75) C
   Objective: (8.3) Find Range

76) B
   Objective: (8.3) Find Median

77) C
   Objective: (8.3) Find Median

78) D
   Objective: (8.3) Find Median

79) Bias results from collecting data at a folk festival. Those attending a folk festival are not representative of all Americans.
   Objective: (8.4) *Identify Misuse or Misrepresentation of Statistics

80) No indication is given of who was surveyed or who responded.
   Objective: (8.4) *Identify Misuse or Misrepresentation of Statistics

81) B
   Objective: (8.3) Find Variance

82) A
   Objective: (8.3) Find Variance

83) D
   Objective: (8.3) Find Variance

84)

<table>
<thead>
<tr>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>0 1 8</td>
</tr>
<tr>
<td>12</td>
<td>2 6 8</td>
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<td>6</td>
<td>13 7 9</td>
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<tr>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>9 6</td>
<td>0 19</td>
</tr>
</tbody>
</table>

   Objective: (8.1) *Construct Stem-and-Leaf Plot

85)

| 7 3 4 7 8 8 9 |
| 8 1 1 3 3 4 5 9 5 7 7 8 8 9 |
| 9 0 1 2 2 4 5 5 6 7 |
| 10 0 1 2 5 5 6 |
| 11 0 1 4 |
| 12 0 |

   Objective: (8.1) *Construct Stem-and-Leaf Plot

86) A
   Objective: (8.3) Find Mode

87) D
   Objective: (8.3) Find Mode

88) B
   Objective: (8.3) Find Mode
89) A
Objective: (8.1) Determine Appropriate Display (Categorical Data)

90) D
Objective: (8.1) Determine Appropriate Display (Categorical Data)

91) [Diagram: Circle graph with sections labeled as follows: 60% Middle Income, 10% Poor, 30% Rich]
Objective: (8.1) *Construct Circle Graph

92) [Diagram: Bar chart with categories: Splits 25%, Capes 40%, Garrisons 35%]
Objective: (8.1) *Construct Circle Graph

93) [Graph showing a line graph with data points for millions of bushels from 1970 to 1976]
Objective: (8.2) *Solve Apps: Construct Line Graph

94) [Graph showing a histogram with frequency bars]
Objective: (8.1) *Construct Histograph

95) [Graph showing a line graph with years and millions of bushels]
Objective: (8.2) *Solve Apps: Construct Line Graph

96) C
Objective: (8.1) Solve Apps: Use Circle Graph

97) B
Objective: (8.1) Solve Apps: Use Circle Graph

98) C
Objective: (8.3) Draw Box-and-Whisker Plot

99) B
Objective: (8.3) Draw Box-and-Whisker Plot

100) [Graph showing a bar chart with days off and frequency]
Objective: (8.1) *Construct Histograph