Practice 3, Chapter 3

STA2023
Broward College

Find the mean for the given sample data. Unless indicated otherwise, round your answer to one more decimal place than is present in the original data values.

1) The students in Hugh Logan’s math class took the Scholastic Aptitude Test. Their math scores are shown below. Find the mean score.

- A) 466.1
- B) 457.0
- C) 475.6
- D) 476.0

Find the median for the given sample data.

2) The temperatures (in degrees Fahrenheit) in 7 different cities on New Year’s Day are listed below. Find the median temperature.

- A) 51°F
- B) 58°F
- C) 67°F
- D) 39°F

Find the mode(s) for the given sample data.

4) The test scores of 40 students are summarized in the frequency distribution below. Find the mean score.

<table>
<thead>
<tr>
<th>Score</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>50-59</td>
<td>6</td>
</tr>
<tr>
<td>60-69</td>
<td>5</td>
</tr>
<tr>
<td>70-79</td>
<td>6</td>
</tr>
<tr>
<td>80-89</td>
<td>11</td>
</tr>
<tr>
<td>90-99</td>
<td>12</td>
</tr>
</tbody>
</table>

- A) 79.0
- B) 75.1
- C) 74.5
- D) 71.1

Find the range for the given sample data.

7) Rich Borne teaches Chemistry 101. Last week he gave his students a quiz. Their scores are listed below.

- A) 11
- B) 55
- C) 20
- D) 35
Find the variance for the given data. Round your answer to one more decimal place than the original data.

8) 19  5  20  6  2
   A) 93.8   B) 71.3   C) 71.2   D) 57.0

Find the standard deviation for the given sample data. Round your answer to one more decimal place than is present in the original data.

9) 18  18  14  11  8  8  10  17  12
   A) 4.0   B) 4.3   C) 3.8   D) 1.6

Find the coefficient of variation for each of the two sets of data, then compare the variation. Round results to one decimal place.

10) Listed below are the systolic blood pressures (in mm Hg) for a sample of men aged 20-29 and for a sample of men aged 60-69.
    Men aged 20-29: 117  125  133  118  131  123
    Men aged 60-69: 130  151  138  125  164  139

Find the standard deviation of the data summarized in the given frequency distribution.

11) The test scores of 40 students are summarized in the frequency distribution below. Find the standard deviation.
    Score  |  Students
    50-59  |  6
    60-69  |  6
    70-79  |  5
    80-89  |  6
    90-99  |  17
    A) 13.9   B) 14.6   C) 16.2   D) 15.4

Use the empirical rule to solve the problem.

12) The systolic blood pressure of 18-year-old women is normally distributed with a mean of 120 mmHg and a standard deviation of 12 mmHg. What percentage of 18-year-old women have a systolic blood pressure between 96 mmHg and 144 mmHg?
    A) 95%   B) 68%   C) 99.7%   D) 99.99%

13) At one college, GPA's are normally distributed with a mean of 3.1 and a standard deviation of 0.6. What percentage of students at the college have a GPA between 2.5 and 3.7?
    A) 84.13%   B) 95%   C) 68%   D) 99.7%

Find the number of standard deviations from the mean. Round your answer to two decimal places.

14) Mario's weekly poker winnings have a mean of $323 and a standard deviation of $50. Last week he won $177. How many standard deviations from the mean is that?
    A) 2.92 standard deviations above the mean   B) 2.92 standard deviations below the mean
    C) 1.46 standard deviations above the mean   D) 1.46 standard deviations below the mean

Find the percentile for the data value.

15) Data set: 51  34  47  67  66  62  36;
    data value: 51
    A) 57   B) 43   C) 50   D) 20
Find the indicated measure.

16) Use the given sample data to find $Q_3$.

\[
49 \quad 52 \quad 52 \quad 74 \quad 67 \quad 55 \quad 55
\]

A) 55.0  
B) 67.0  
C) 61.0  
D) 6.0

Construct a boxplot for the given data. Include values of the 5-number summary in all boxplots.

17) The weights (in pounds) of 30 newborn babies are listed below. Construct a boxplot for the data set.

\[
5.5 \quad 5.7 \quad 5.8 \quad 5.9 \quad 6.1 \quad 6.1 \quad 6.3 \quad 6.4 \quad 6.5 \quad 6.6 \\
6.7 \quad 6.7 \quad 6.7 \quad 6.9 \quad 7.0 \quad 7.0 \quad 7.1 \quad 7.2 \quad 7.2 \\
7.4 \quad 7.5 \quad 7.7 \quad 7.7 \quad 7.8 \quad 8.0 \quad 8.1 \quad 8.1 \quad 8.3 \quad 8.7
\]

A)

B)