

**Solutions are included at the end of the worksheet. This worksheet is optional and will not be turned in, but may be helpful in reviewing material and studying for exams.**

1) The January utility bills (in dollars) for 20 residents of a large city are listed below. Find the range of the data.

70 72 71 70 69 73 69 68 70 71  
67 71 70 74 69 68 71 71 71 72

2) Which measure of central tendency is more representative of the typical observation if the graph of the data is skewed to the left?

A) Mean

B) Mode

C) Midrange

D) Median

3) Find the sample standard deviation.

14, 15, 16, 17, 18

4) For the following data, approximate the mean number of unused vacation days at the end of the year.

| Days | Frequency |
|------|-----------|
| 1-2  | 1         |
| 3-4  | 22        |
| 5-6  | 3         |
| 7-8  | 18        |
| 9-10 | 2         |

5) The test scores of 30 students are listed below. Draw a boxplot that represents the data.

31 41 45 48 52 55 56 56 63 65  
67 67 69 70 70 74 75 78 79 79  
80 81 83 85 85 87 90 92 95 99

6) A random sample of sale prices of homes yielded the following summary information:

MIN \$42,000      25%: \$81,000      Median: \$138,000  
MAX \$271,000    75%: \$169,000

Comment on a home that had a sale price of \$415,000.

- A) This value falls outside the upper fence and is considered an outlier.
- B) This value falls outside of the third quartile, but cannot be considered an outlier.
- C) This sale price would be expected since it falls inside the lower and upper fences.
- D) This sale price falls between the lower and upper fences. It can be considered a potential outlier.

7) Find the mean, median, and mode of the following statistic students' test scores:

100 103 96 100 93 101 100 94 95 98

8) Over the last 10 years four mutual funds all had the same mean rate of return, 12%. These mutual funds had different standard deviations as follows: Mutual Money 8%, Co-joined Investments 6%, Together Fund 4%, All for One Fund 9%. Which mutual fund investment is the most consistent in rate of return?

- A) Mutual Money
- B) Together Fund
- C) All for One Fund
- D) Co-joined Investments

9) A pharmaceutical testing company wants to test a new cholesterol drug. The average cholesterol of the target population is 200 mg and they have a standard deviation of 25 mg. The company wished to test a sample of people who fall between 1.5 and 3 z-scores above the mean. Into what range must a candidate's cholesterol level be in order for the candidate to be included in the study?

- A) 237.5 - 275
- B) 225 - 237.5
- C) 162.5 - 275
- D) 125 - 162.5

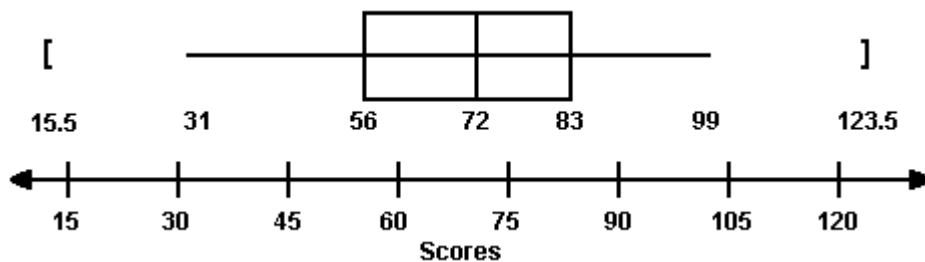
10) The average score of local students on a college entrance exam is 110, with a standard deviation of 5. The distribution is roughly bell shaped. Use the Empirical Rule to find the percentage of local students with scores above 120.

- A) 95%
- B) 5%
- C) 2.5%
- D) 97.5%

Answer Key

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- 1) \$7
- 2) D
- 3) 1.6
- 4) 5.4
- 5)



- 6) A
- 7) mean 98, median 99, mode 100
- 8) B
- 9) A
- 10) C