**Chapter 3: Variability**

1. Which measure of variability describes the typical distance of scores from the mean?

A. range

B. deviation score

C. variance

\*D. standard deviation

Learning Objective: 3-1: Explain what the standard deviation measures.

Cognitive Domain: Knowledge

Answer Location: Population Variability

2. When computing the standard deviation we must first subtract the mean from each score. This difference is called \_\_\_\_\_\_\_\_\_\_\_\_.

A. the range

\*B. a deviation score

C. the variance

D. the sum of the squared deviation scores

Learning Objective: 3-1: Explain what the standard deviation measures.

Cognitive Domain: Knowledge

Answer Location: Population Variability

3. If all scores have the same value, what will the standard deviation equal?

\*A. 0

B. 1

C. It is not possible to know without the data.

Learning Objective: 3-1: Explain what the standard deviation measures.

Cognitive Domain: Knowledge

Answer Location: Population Variability

4. The range is best used when the data are \_\_\_\_\_\_\_\_\_\_\_.

A. nominal

\*B. ordinal

C. interval/ratio

Learning Objective: 3-1: Explain what the standard deviation measures.

Cognitive Domain: Knowledge

Answer Location: Population Variability

5. When computing the standard deviation, *SS* stands for \_\_\_\_\_\_\_\_\_\_\_\_.

A. squared scores

B. sum of scores

\*C. sum of the squared deviation scores

D. square of the summed scores

Learning Objective: 3-3: Compute the variance and the standard deviation for a sample using a calculator and SPSS.

Cognitive Domain: Knowledge

Answer Location: Steps in Computing a Population’s Standard Deviation

6. We divide *SS* by *N* = 1 when computing the sample variance.

\*True

False

Learning Objective: 3-3: Compute the variance and the standard deviation for a sample using a calculator and SPSS.

Cognitive Domain: Knowledge

Answer Location: Sample Variability

7. Compute the variance for this sample of 8 scores.

A. 2.19

B. 4.80

\*C. 23.07

D. 532.22

Learning Objective: 3-3: Compute the variance and the standard deviation for a sample using a calculator and SPSS.

Cognitive Domain: Application

Answer Location: Sample Variability

8. Compute the standard deviation for this sample of 8 scores.

A. 2.19

\*B. 4.80

C. 23.07

D. 532.22

Learning Objective: 3-3: Compute the variance and the standard deviation for a sample using a calculator and SPSS.

Cognitive Domain: Application

Answer Location: Sample Variability

9. Compute the variance for this population of 10 scores: 3, 3, 2, 4, 5, 1, 9, 8, 5, 7.

A. 1

B. 2.63

\*C. 6.9

D. 8

Learning Objective: 3-2: Compute the variance and the standard deviation for a population using a calculator.

Cognitive Domain: Application

Answer Location: Steps in Computing a Population’s Standard Deviation

10. Compute the standard deviation for this population of 10 scores: 3, 3, 2, 4, 5, 1, 9, 8, 5, 7.

A. 1

\*B. 2.63

C. 6.9

D. 8

Learning Objective: 3-2: Compute the variance and the standard deviation for a population using a calculator.

Cognitive Domain: Application

Answer Location: Steps in Computing a Population’s Standard Deviation

11. Use SPSS to compute the standard deviation for typical salaries of a sample of 10 states: $70,000, $41,400, $46,700, $38,800, $55,400, $62,800, $53,200, $41,100, $69,800, and $62,900.

A. $3762.31

B. $38,800.00

C. $54,210.00

\*D. $11,897.47

Learning Objective: 3-3: Compute the variance and the standard deviation for a sample using a calculator and SPSS.

Cognitive Domain: Application

Answer Location: SPSS