CHAPTER 6

FILL-IN-THE-BLANK ITEMS

Introduction

To describe a frequency distribution, we need to know a measure of the (1) _____ of the data in addition to measures of central tendency. Four measures discussed in this chapter are the range, the average deviation, the (2) _____, and the (3) _____ _____.

The Range

The (4) _____ is the difference between the highest score in the distribution and the lowest score. The range is easy to determine but not very useful for further statistical procedures.

The Average Deviation

The average deviation, symbolized by (5) _____, is useful as a prelude to the most commonly used measures of dispersion, the (6) _____ and the standard deviation. In order to keep from obtaining zero each time the deviations around the sample mean are summed, we take the (7) _____ _____ of the deviations before summing.

The Variance and the Standard Deviation

The (8) _____ is the average of the squared deviations, and the square root of the average is called the (9) _____ _____. The statistic based directly on the formula for the

population variance is a (10) _____ estimate of the population variance. To compensate for SD^2's tendency to (11) _____ the population variance, we have to modify the formula slightly, which we did by dividing the numerator by (12) _____ rather than by *N*. Standard deviation is the (13) _____ _____ of the variance.

In addition to defining formulas, (14) _____ or raw-score formulas are introduced. Raw-score formulas require fewer (15) _____ than the defining formulas and are easier to use when computed with a pocket calculator.

s can be visualized as a width measure on the (16) _____ of a frequency polygon. A useful way to estimate the standard deviation is to divide the (17) _____ by (18) _____. The numerator of variance is sometimes called the (19) _____, _____, _____, which is the sum of the squared deviations about the (20) _____. It is symbolized by (21) _____.

Standard Scores (*z Scores)*

Values on the standard deviation scale are called either (22) _____ scores or (23) _____ scores. A (24) _____ is the deviation of a raw score from the mean in standard deviation units. The (25) _____ of the *z* score tells us the direction of the score relative to the mean. A (26) _____ *z* score indicates a raw score below the mean. To convert a *z* score back to a raw score, multiply it by the standard deviation and add the (27) _____.

Troubleshooting Your Computations

In computing any of the measures discussed in the chapter, it is desirable to have a (28) _____ for a correct answer. For example, if the distribution is large and symmetrical, *s* should be approximately (29) _____ of the range. You must always get (30) _____ numbers for the standard deviation and the variance. When computing *s*, don't forget to take the (31) _____ _____.