PSYC 2317: Statistical Methods for Psychology

Tarleton State University | Homework 2 | Fall 2019

1. Calculate the average absolute deviation, variance, and standard deviation for the following set of scores: 2, 13, 4, 10, 6

2. For the following set of score:

   2 9 6 8 9 8

   (a) calculate the range and standard deviation

   (b) Add 2 points to each score and compute the range and standard deviation again. Describe how adding a constant to each score influences measures of variability.

3. For a set of observations with a mean of 60 and a standard deviation of 12:

   (a) find the z-score for each of the following X values

   $$X = 75 \quad X = 48 \quad X = 84$$
   $$X = 54 \quad X = 78 \quad X = 51$$

   (b) Find the raw score (X-value) for each of the following z-scores

   $$z = 1.00 \quad z = 0.25 \quad z = 1.50$$
   $$z = -0.50 \quad z = -1.25 \quad z = -2.50$$

4. A set of observations with a mean of 76 and a standard deviation of 12 is transformed into a *standardized distribution* with a mean of 100 and standard deviation of 20. Find the new, standardized score for each of the following values from the original set of observations:

   (a) $X = 61$

   (b) $X = 70$

   (c) $X = 85$

   (d) $X = 94$