

Deviation/Variability

The deviation of a set of numbers is the difference between the average and the individual terms.

Example 1 - Jane paces off the following fire run lengths. Find the deviation of the fire run lengths, given as 6.5, 6.0, 8.0, and 7.5 chains.

Step 1. Calculate the average (see Section 9.3). Sum the numbers and divide by the number of individual elements: $28/4 = 7.0$

Step 2. Now, subtract each term from the average.

$$6.5 - 7.0 = -0.5$$

$$6.0 - 7.0 = -1$$

$$8.0 - 7.0 = 1.0$$

$$7.5 - 7.0 = 0.5$$

These differences are the deviations.