

Conditions

ANOVA (Analysis of Variances)

The following are data cholesterol levels of 60 employees.

X

205	327	189	205	148	139	178	157	188	301
195	185	164	182	201	248	298	264	177	169
174	169	155	188	194	192	177	189	188	176
158	305	248	189	209	159	202	177	278	268
166	285	249	203	199	170	165	180	201	209
301	188	165	173	183	206	202	283	207	156

Find the mean, median, mode, and standard deviation for X from the data given below.

Solution

The mean:

$$\bar{x} = \frac{1}{n} \cdot \sum_{i=1}^n x_i$$

203.433

The standard deviation:

$$\sigma = \sqrt{\frac{1}{N} \sum_{i=1}^N (x_i - \mu)^2}, \text{ where } \mu = \frac{1}{N} \sum_{i=1}^N x_i.$$

45.5577

The median:

In statistics and probability theory, **median** is described as the numerical value separating the higher half of a sample, a population, or a probability distribution, from the lower half. The *median* of a finite list of numbers can be found by arranging all the observations from lowest value to highest value and picking the middle one. If there is an even number of observations, then there is no single middle value; the median is then usually defined to be the mean of the two middle values

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The mode:

The **mode** is the value that appears most often in a set of data.

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