

1. Problem

A continuous random variable X was measured 9 times. The sorted data are shown below, along with each datum's index.

i	x
1	91.031
2	91.227
3	91.452
4	91.452
5	91.453
6	91.536
7	91.634
8	91.644
9	91.678

The total of the measurements is 823.107.

- (a) Determine the percentile rank of the value 91.452. In other words, determine what percent of data are less than or equal to 91.452.
- (b) Determine the datum corresponding to a percentile rank of 0.889. In other words, determine x such that 88.9% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.

2. Problem

A continuous random variable X was measured 21 times. The sorted data are shown below.

70.043	70.068	70.099	70.177	70.245	70.278	70.308
70.358	70.413	70.433	70.615	70.662	70.770	70.858
70.860	70.995	71.020	71.157	71.691	71.693	71.881

The total of the measurements is 1484.624.

- (a) Determine the percentile rank of the value 70.177. In other words, determine what percent of data are less than or equal to 70.177.
- (b) Determine the datum corresponding to a percentile rank of 0.238. In other words, determine x such that 23.8% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.