

1. Problem

A continuous random variable X was measured 10 times. The sorted data are shown below, along with each datum's index.

i	x
1	81.182
2	81.746
3	86.975
4	88.376
5	88.744
6	90.028
7	91.934
8	103.533
9	129.838
10	140.287

The total of the measurements is 982.643.

- Determine the percentile rank of the value 86.975. In other words, determine what percent of data are less than or equal to 86.975.
- Determine the datum corresponding to a percentile rank of 0.4. In other words, determine x such that 40% of the data are less than or equal to x .
- Determine the mean of the measurements.
- Determine the median of the measurements.

2. Problem

A continuous random variable X was measured 28 times. The sorted data are shown below.

13.209	13.903	14.030	14.172	14.370	14.517	14.564
14.591	14.687	14.801	14.849	14.954	14.977	14.999
15.176	15.200	15.205	15.231	15.286	15.337	15.570
15.797	15.897	16.308	16.341	16.350	16.402	16.758

The total of the measurements is 423.481.

- (a) Determine the percentile rank of the value 13.209. In other words, determine what percent of data are less than or equal to 13.209.
- (b) Determine the datum corresponding to a percentile rank of 0.321. In other words, determine x such that 32.1% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.