

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	20.562
2	21.483
3	21.990
4	22.319
5	22.351
6	22.352
7	22.431
8	22.536
9	22.755
10	22.824

The total of the measurements is 221.603.

- Determine the percentile rank of the value 22.755. In other words, determine what percent of data are less than or equal to 22.755.
- Determine the datum corresponding to a percentile rank of 0.3. In other words, determine x such that 30% 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 16 times. The sorted data are shown below.

54.202	58.404	78.259	80.063
80.594	82.722	87.032	95.188
106.464	108.125	110.410	114.455
120.004	130.895	133.070	145.615

The total of the measurements is 1585.502.

- (a) Determine the percentile rank of the value 82.722. In other words, determine what percent of data are less than or equal to 82.722.
- (b) Determine the datum corresponding to a percentile rank of 0.125. In other words, determine x such that 12.5% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.