

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	112.741
2	122.763
3	126.148
4	127.327
5	128.552
6	128.665
7	129.982
8	132.216
9	143.079

The total of the measurements is 1151.473.

- Determine the percentile rank of the value 126.148. In other words, determine what percent of data are less than or equal to 126.148.
- Determine the datum corresponding to a percentile rank of 0.778. In other words, determine x such that 77.8% 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 30 times. The sorted data are shown below.

10.204	10.606	10.743	10.785	10.807	10.854	10.855	10.881	10.902	11.467
11.549	12.171	12.455	12.636	12.697	12.764	13.047	13.048	13.241	13.282
13.364	13.790	13.908	14.225	14.415	14.517	14.663	14.670	14.671	14.754

The total of the measurements is 377.971.

- (a) Determine the percentile rank of the value 10.854. In other words, determine what percent of data are less than or equal to 10.854.
- (b) Determine the datum corresponding to a percentile rank of 0.267. In other words, determine x such that 26.7% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.