

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	21.271
2	22.346
3	22.408
4	26.111
5	28.367
6	30.847
7	31.464
8	38.058
9	38.106

The total of the measurements is 258.978.

- Determine the percentile rank of the value 21.271. In other words, determine what percent of data are less than or equal to 21.271.
- Determine the datum corresponding to a percentile rank of 0.222. In other words, determine x such that 22.2% 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.

60.458	61.133	63.198	63.795	64.229	65.359
65.486	68.269	72.829	73.852	74.909	75.251
76.372	76.889	76.914	86.112	86.369	87.722
87.887	89.151	89.930	90.764	90.785	92.222
99.385	100.905	100.975	105.996	114.840	115.660

The total of the measurements is 2477.646.

- (a) Determine the percentile rank of the value 76.914. In other words, determine what percent of data are less than or equal to 76.914.
- (b) Determine the datum corresponding to a percentile rank of 0.8. In other words, determine x such that 80% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.