

1. Problem

A continuous random variable X was measured 8 times. The sorted data are shown below, along with each datum's index.

i	x
1	63.373
2	63.820
3	65.782
4	67.427
5	67.819
6	68.153
7	69.450
8	69.754

The total of the measurements is 535.578.

- (a) Determine the percentile rank of the value 63.373. In other words, determine what percent of data are less than or equal to 63.373.
- (b) Determine the datum corresponding to a percentile rank of 0.625. In other words, determine x such that 62.5% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.

2. Problem

A continuous random variable X was measured 32 times. The sorted data are shown below.

30.156	30.626	31.250	31.341	32.083	32.520	32.598	32.607
32.854	32.976	34.028	34.182	34.528	35.271	35.529	36.869
37.554	39.009	39.056	39.285	39.799	39.868	41.096	42.372
44.427	45.070	45.147	45.655	46.139	46.468	46.548	47.869

The total of the measurements is 1214.78.

- (a) Determine the percentile rank of the value 35.271. In other words, determine what percent of data are less than or equal to 35.271.
- (b) Determine the datum corresponding to a percentile rank of 0.188. In other words, determine x such that 18.8% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.