

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	53.916
2	54.699
3	57.595
4	63.148
5	67.500
6	67.750
7	68.077
8	69.795

The total of the measurements is 502.48.

- (a) Determine the percentile rank of the value 69.795. In other words, determine what percent of data are less than or equal to 69.795.
- (b) Determine the datum corresponding to a percentile rank of 0.25. In other words, determine x such that 25% 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 64 times. The sorted data are shown below.

22.993	25.353	26.983	27.094	27.461	27.957	28.681	29.009
29.483	30.156	30.300	31.347	31.449	31.481	31.674	31.708
31.796	31.821	31.917	32.476	33.243	33.497	33.509	33.562
33.650	33.659	34.648	34.680	34.743	35.211	35.304	35.453
35.590	35.618	35.633	35.846	36.095	36.188	36.509	36.932
36.958	37.164	37.204	37.279	37.527	37.582	37.682	37.773
38.031	38.079	38.390	38.428	38.857	38.895	38.931	38.978
39.079	39.196	39.253	39.395	39.419	39.440	39.450	39.515

The total of the measurements is 2213.214.

- (a) Determine the percentile rank of the value 38.895. In other words, determine what percent of data are less than or equal to 38.895.
- (b) Determine the datum corresponding to a percentile rank of 0.766. In other words, determine x such that 76.6% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.