

1. Problem

A continuous random variable X was measured 6 times. The sorted data are shown below, along with each datum's index.

i	x
1	21.563
2	27.973
3	29.211
4	30.211
5	31.088
6	31.559

The total of the measurements is 171.605.

- (a) Determine the percentile rank of the value 21.563. In other words, determine what percent of data are less than or equal to 21.563.
- (b) Determine the datum corresponding to a percentile rank of 0.333. In other words, determine x such that 33.3% 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 28 times. The sorted data are shown below.

50.003	50.078	50.082	50.219	50.300	50.300	50.922
51.303	51.366	51.499	51.558	51.729	52.005	52.130
52.179	52.781	53.221	53.435	53.599	53.870	53.971
54.293	54.560	54.600	54.690	54.869	54.908	54.948

The total of the measurements is 1469.418.

- (a) Determine the percentile rank of the value 51.558. In other words, determine what percent of data are less than or equal to 51.558.
- (b) Determine the datum corresponding to a percentile rank of 0.786. In other words, determine x such that 78.6% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.