

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 21 times. The sorted data are shown below.

50.003	50.082	50.219	50.300	50.300	50.922	51.303
51.366	51.499	51.729	52.005	52.130	52.781	53.435
53.599	53.870	53.971	54.600	54.869	54.908	54.948

The total of the measurements is 1098.839.

- (a) Determine the percentile rank of the value 51.499. In other words, determine what percent of data are less than or equal to 51.499.
- (b) Determine the datum corresponding to a percentile rank of 0.476. In other words, determine x such that 47.6% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.