

1. Problem

A continuous random variable X was measured 7 times. The sorted data are shown below, along with each datum's index.

i	x
1	50.165
2	50.619
3	50.940
4	51.471
5	52.323
6	52.524
7	52.885

The total of the measurements is 360.927.

- (a) Determine the percentile rank of the value 51.471. In other words, determine what percent of data are less than or equal to 51.471.
- (b) Determine the datum corresponding to a percentile rank of 0.714. In other words, determine x such that 71.4% 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 45 times. The sorted data are shown below.

80.189	80.499	81.941	83.450	87.152	92.734	93.184	94.057	94.746
94.823	95.521	95.616	95.770	98.633	98.804	99.797	100.563	100.612
102.234	102.404	102.475	102.603	102.616	102.913	102.979	104.764	107.084
111.589	112.207	112.383	116.412	121.764	122.378	124.508	127.419	129.019
131.390	132.134	134.409	137.548	143.706	144.108	145.319	149.384	152.250

The total of the measurements is 4946.09.

- (a) Determine the percentile rank of the value 124.508. In other words, determine what percent of data are less than or equal to 124.508.
- (b) Determine the datum corresponding to a percentile rank of 0.844. In other words, determine x such that 84.4% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.