

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	62.532
2	62.667
3	63.491
4	63.999
5	64.084
6	64.701
7	64.923

The total of the measurements is 446.397.

- (a) Determine the percentile rank of the value 62.667. In other words, determine what percent of data are less than or equal to 62.667.
- (b) Determine the datum corresponding to a percentile rank of 0.143. In other words, determine x such that 14.3% 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 50 times. The sorted data are shown below.

40.013	40.052	40.078	40.185	40.245	40.286	40.504	40.908	40.932	41.288
42.219	42.416	42.529	42.550	42.750	43.386	44.162	44.871	45.243	46.731
48.273	49.163	49.749	50.522	51.862	51.893	52.397	52.691	53.476	54.118
54.416	54.418	54.692	54.985	55.095	55.303	55.478	55.585	56.282	56.473
57.292	57.321	57.774	58.780	58.800	58.821	59.153	59.192	59.590	59.683

The total of the measurements is 2494.625.

- (a) Determine the percentile rank of the value 40.078. In other words, determine what percent of data are less than or equal to 40.078.
- (b) Determine the datum corresponding to a percentile rank of 0.2. In other words, determine x such that 20% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.