

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	26.572
2	27.298
3	27.726
4	29.714
5	30.886
6	31.192
7	32.059

The total of the measurements is 205.447.

- (a) Determine the percentile rank of the value 27.726. In other words, determine what percent of data are less than or equal to 27.726.
- (b) Determine the datum corresponding to a percentile rank of 0.571. In other words, determine x such that 57.1% 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 48 times. The sorted data are shown below.

40.022	40.053	40.070	40.199	40.201	40.233	40.306	40.321
40.333	40.379	40.482	40.533	40.735	40.891	40.998	41.037
41.071	41.090	41.441	41.623	41.878	41.881	41.954	41.968
41.979	41.995	42.004	42.148	42.281	42.422	42.649	42.879
43.263	43.487	43.548	43.558	44.156	44.357	44.706	44.803
44.826	44.880	45.332	45.399	45.547	46.263	47.118	47.767

The total of the measurements is 2037.066.

- (a) Determine the percentile rank of the value 44.156. In other words, determine what percent of data are less than or equal to 44.156.
- (b) Determine the datum corresponding to a percentile rank of 0.375. In other words, determine x such that 37.5% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.