

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	10.817
2	10.899
3	11.409
4	11.734
5	12.212
6	13.400
7	13.821

The total of the measurements is 84.292.

- (a) Determine the percentile rank of the value 11.409. In other words, determine what percent of data are less than or equal to 11.409.
- (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 56 times. The sorted data are shown below.

60.003	60.025	60.038	60.070	60.084	60.222	60.234	60.241
60.263	60.367	60.381	60.564	60.803	60.820	60.839	60.952
61.667	61.668	61.789	61.897	62.219	62.988	62.988	63.147
64.090	64.479	64.502	65.160	65.529	65.715	65.982	65.992
66.064	66.121	66.221	66.519	66.598	66.632	66.648	66.739
66.792	67.933	68.284	68.351	68.591	68.715	68.881	69.320
69.413	69.513	69.557	69.693	69.775	69.840	69.870	69.874

The total of the measurements is 3621.662.

- (a) Determine the percentile rank of the value 66.121. In other words, determine what percent of data are less than or equal to 66.121.
- (b) Determine the datum corresponding to a percentile rank of 0.964. In other words, determine x such that 96.4% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.