

1. Problem

A continuous random variable X was measured 9 times. The sorted data are shown below, along with each datum's index.

i	x
1	62.136
2	69.665
3	70.557
4	70.792
5	71.175
6	71.358
7	72.011
8	72.786
9	77.432

The total of the measurements is 637.912.

- (a) Determine the percentile rank of the value 70.557. In other words, determine what percent of data are less than or equal to 70.557.
- (b) Determine the datum corresponding to a percentile rank of 0.778. In other words, determine x such that 77.8% 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 63 times. The sorted data are shown below.

51.393	52.819	52.890	52.960	53.474	53.606	55.032	55.044	55.288
55.415	55.477	55.657	55.819	55.841	55.846	56.290	56.418	56.509
56.679	56.759	57.135	57.166	57.260	57.477	57.658	57.761	57.788
57.876	57.999	58.099	58.175	58.240	58.319	58.348	58.408	58.526
58.631	58.641	58.697	58.709	58.716	58.750	58.763	58.851	58.854
58.952	58.988	59.009	59.010	59.010	59.117	59.119	59.185	59.267
59.297	59.352	59.434	59.478	59.648	59.761	59.763	59.868	59.874

The total of the measurements is 3622.195.

- (a) Determine the percentile rank of the value 55.032. In other words, determine what percent of data are less than or equal to 55.032.
- (b) Determine the datum corresponding to a percentile rank of 0.556. In other words, determine x such that 55.6% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.