

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	70.052
2	73.549
3	74.854
4	76.600
5	78.862
6	79.440
7	79.900

The total of the measurements is 533.257.

- Determine the percentile rank of the value 73.549. In other words, determine what percent of data are less than or equal to 73.549.
- 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 .
- Determine the mean of the measurements.
- Determine the median of the measurements.

2. Problem

A continuous random variable X was measured 42 times. The sorted data are shown below.

80.959	80.974	81.090	81.091	81.209	81.301	81.306
81.324	81.341	81.361	81.385	81.391	81.404	81.434
81.446	81.464	81.467	81.470	81.481	81.492	81.518
81.527	81.532	81.534	81.560	81.570	81.602	81.604
81.609	81.615	81.652	81.653	81.672	81.705	81.737
81.739	81.755	81.779	81.785	81.799	81.921	81.990

The total of the measurements is 3423.248.

- (a) Determine the percentile rank of the value 81.481. In other words, determine what percent of data are less than or equal to 81.481.
- (b) Determine the datum corresponding to a percentile rank of 0.929. In other words, determine x such that 92.9% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.