

1. Problem

A continuous random variable X was measured 11 times. The sorted data are shown below, along with each datum's index.

i	x
1	70.282
2	70.288
3	70.405
4	70.674
5	70.870
6	70.959
7	73.629
8	74.133
9	74.274
10	74.276
11	74.761

The total of the measurements is 794.551.

- Determine the percentile rank of the value 74.761. In other words, determine what percent of data are less than or equal to 74.761.
- Determine the datum corresponding to a percentile rank of 0.909. In other words, determine x such that 90.9% 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 30 times. The sorted data are shown below.

70.131	70.442	70.677	70.786	70.980	71.022
71.034	71.129	71.277	71.417	71.429	71.481
71.515	71.755	71.818	71.838	71.850	72.048
72.137	72.190	72.249	72.260	72.272	72.417
72.486	72.582	72.616	72.711	72.772	72.952

The total of the measurements is 2152.273.

- (a) Determine the percentile rank of the value 70.677. In other words, determine what percent of data are less than or equal to 70.677.
- (b) Determine the datum corresponding to a percentile rank of 0.967. In other words, determine x such that 96.7% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.