

1. Problem

A continuous random variable X was measured 12 times. The sorted data are shown below, along with each datum's index.

i	x
1	70.375
2	70.486
3	72.350
4	73.393
5	75.008
6	77.294
7	77.424
8	78.655
9	82.604
10	84.284
11	86.610
12	87.168

The total of the measurements is 935.651.

- Determine the percentile rank of the value 77.424. In other words, determine what percent of data are less than or equal to 77.424.
- Determine the datum corresponding to a percentile rank of 0.917. In other words, determine x such that 91.7% 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 24 times. The sorted data are shown below.

90.052	90.102	90.464	90.765	90.831	90.928
90.972	92.344	92.536	93.590	93.839	94.291
94.824	95.098	95.629	95.986	96.227	96.239
96.250	96.402	98.553	99.754	99.843	99.869

The total of the measurements is 2265.388.

- (a) Determine the percentile rank of the value 95.098. In other words, determine what percent of data are less than or equal to 95.098.
- (b) Determine the datum corresponding to a percentile rank of 0.75. In other words, determine x such that 75% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.