

1. Problem

A continuous random variable X was measured 8 times. The sorted data are shown below, along with each datum's index.

i	x
1	13.902
2	20.014
3	23.009
4	24.960
5	25.610
6	26.274
7	27.237
8	29.150

The total of the measurements is 190.156.

- (a) Determine the percentile rank of the value 24.96. In other words, determine what percent of data are less than or equal to 24.96.
- (b) Determine the datum corresponding to a percentile rank of 0.875. In other words, determine x such that 87.5% 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 81 times. The sorted data are shown below.

90.016	90.026	90.027	90.041	90.041	90.049	90.067	90.072	90.085
90.090	90.121	90.153	90.179	90.186	90.201	90.202	90.205	90.269
90.288	90.298	90.303	90.309	90.313	90.318	90.330	90.335	90.378
90.406	90.409	90.416	90.429	90.456	90.465	90.478	90.493	90.505
90.517	90.521	90.535	90.537	90.538	90.549	90.563	90.568	90.579
90.582	90.589	90.615	90.627	90.629	90.633	90.641	90.746	90.829
90.845	90.848	90.867	90.873	90.876	90.886	90.897	90.955	90.968
90.986	91.009	91.011	91.013	91.061	91.085	91.126	91.162	91.177
91.431	91.562	91.642	91.702	91.706	91.918	91.964	91.966	92.432

The total of the measurements is 7343.725.

- (a) Determine the percentile rank of the value 90.627. In other words, determine what percent of data are less than or equal to 90.627.
- (b) Determine the datum corresponding to a percentile rank of 0.654. In other words, determine x such that 65.4% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.