

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	70.003
2	70.011
3	70.052
4	73.123
5	73.158
6	76.235
7	76.464
8	79.774

The total of the measurements is 588.82.

- (a) Determine the percentile rank of the value 73.123. In other words, determine what percent of data are less than or equal to 73.123.
- (b) Determine the datum corresponding to a percentile rank of 0.625. In other words, determine x such that 62.5% 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 21 times. The sorted data are shown below.

33.601	34.166	40.695	42.185	42.926	44.088	44.164
46.378	47.527	47.542	48.013	48.174	48.478	48.744
49.177	49.269	49.465	49.470	49.488	49.580	49.769

The total of the measurements is 962.899.

- (a) Determine the percentile rank of the value 47.527. In other words, determine what percent of data are less than or equal to 47.527.
- (b) Determine the datum corresponding to a percentile rank of 0.286. In other words, determine x such that 28.6% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.