

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	59.556
2	60.246
3	60.737
4	68.278
5	72.203
6	77.342
7	78.726
8	78.738
9	80.912
10	82.728
11	86.981

The total of the measurements is 806.447.

- (a) Determine the percentile rank of the value 59.556. In other words, determine what percent of data are less than or equal to 59.556.
- (b) Determine the datum corresponding to a percentile rank of 0.545. In other words, determine x such that 54.5% 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 24 times. The sorted data are shown below.

10.104	10.216	10.403	11.960	12.383	12.537	12.707	13.095
14.028	14.123	14.257	14.301	14.981	15.918	16.759	16.823
17.073	17.618	17.656	18.559	18.899	19.025	19.070	19.742

The total of the measurements is 362.237.

- (a) Determine the percentile rank of the value 14.301. In other words, determine what percent of data are less than or equal to 14.301.
- (b) Determine the datum corresponding to a percentile rank of 0.417. In other words, determine x such that 41.7% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.