

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	20.202
2	20.239
3	23.368
4	24.707
5	26.576
6	28.176
7	31.021
8	31.454

The total of the measurements is 205.743.

- (a) Determine the percentile rank of the value 24.707. In other words, determine what percent of data are less than or equal to 24.707.
- (b) Determine the datum corresponding to a percentile rank of 0.25. In other words, determine x such that 25% 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 40 times. The sorted data are shown below.

40.264	40.386	40.480	40.722	40.802	41.082	41.084	41.696
42.609	42.740	42.743	43.087	43.883	44.634	46.152	47.894
48.950	49.132	49.159	49.535	49.918	51.254	52.741	53.716
53.919	54.878	55.505	56.448	56.485	57.997	58.096	58.174
58.671	59.022	59.261	59.480	59.672	59.727	59.774	59.799

The total of the measurements is 2011.571.

- (a) Determine the percentile rank of the value 41.084. In other words, determine what percent of data are less than or equal to 41.084.
- (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.