

1. Problem

A continuous random variable X was measured 6 times. The sorted data are shown below, along with each datum's index.

i	x
1	84.222
2	84.756
3	84.999
4	85.302
5	85.727
6	85.904

The total of the measurements is 510.91.

- (a) Determine the percentile rank of the value 85.727. In other words, determine what percent of data are less than or equal to 85.727.
- (b) Determine the datum corresponding to a percentile rank of 0.667. In other words, determine x such that 66.7% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.

2. Problem

A continuous random variable X was measured 63 times. The sorted data are shown below.

118.700	123.190	124.657	127.160	129.518	130.113	130.874	131.015	131.470
132.004	132.853	133.494	133.529	133.651	133.883	133.925	134.263	134.675
134.856	134.868	135.197	135.251	136.786	137.106	137.903	137.962	138.532
139.588	139.868	140.327	140.634	141.371	141.591	141.922	142.166	142.256
142.281	142.720	142.826	144.323	144.371	144.422	144.682	145.275	146.852
147.050	147.252	148.622	149.077	149.667	150.560	150.606	150.707	150.920
151.648	152.359	152.768	152.896	154.131	154.458	155.785	157.159	158.430

The total of the measurements is 8879.005.

- (a) Determine the percentile rank of the value 150.606. In other words, determine what percent of data are less than or equal to 150.606.
- (b) Determine the datum corresponding to a percentile rank of 0.905. In other words, determine x such that 90.5% of the data are less than or equal to x .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.