

**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	93.597
2	93.988
3	94.469
4	94.602
5	95.576
6	95.637

The total of the measurements is 567.869.

- (a) Determine the percentile rank of the value 94.469. In other words, determine what percent of data are less than or equal to 94.469.
- (b) Determine the datum corresponding to a percentile rank of 1. In other words, determine  $x$  such that 100% 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 54 times. The sorted data are shown below.

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50.277	50.299	50.360	50.424	50.622	50.767	50.796	51.119	51.202
51.765	52.097	52.316	52.379	52.600	52.620	52.794	53.116	53.348
53.523	53.609	53.639	53.918	53.954	54.105	54.427	54.457	54.627
54.770	55.041	55.451	56.154	56.165	56.176	56.652	56.704	56.717
56.806	57.075	57.464	57.545	57.581	57.628	58.379	58.671	58.936
59.033	59.323	60.910	61.135	62.167	62.541	63.105	63.914	65.399

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The total of the measurements is 2996.602.

- (a) Determine the percentile rank of the value 50.622. In other words, determine what percent of data are less than or equal to 50.622.
- (b) Determine the datum corresponding to a percentile rank of 0.944. In other words, determine  $x$  such that 94.4% of the data are less than or equal to  $x$ .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.