

**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	90.572
2	91.020
3	95.376
4	101.027
5	111.046
6	116.055

The total of the measurements is 605.096.

- (a) Determine the percentile rank of the value 91.02. In other words, determine what percent of data are less than or equal to 91.02.
- (b) Determine the datum corresponding to a percentile rank of 0.833. In other words, determine  $x$  such that 83.3% 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 12 times. The sorted data are shown below.

13.214	25.711	27.841	28.950
31.240	33.891	34.758	39.901
41.519	44.171	45.672	45.719

The total of the measurements is 412.587.

- (a) Determine the percentile rank of the value 34.758. In other words, determine what percent of data are less than or equal to 34.758.
- (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.