

**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	70.647
2	71.854
3	72.886
4	73.293
5	73.873
6	74.402

The total of the measurements is 436.955.

- (a) Determine the percentile rank of the value 72.886. In other words, determine what percent of data are less than or equal to 72.886.
- (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 20 times. The sorted data are shown below.

21.671	21.955	22.853	24.090	24.321
25.286	25.803	26.888	27.064	27.785
28.623	28.774	30.027	31.924	40.948
41.192	42.350	42.455	54.489	57.090

The total of the measurements is 645.588.

- (a) Determine the percentile rank of the value 57.09. In other words, determine what percent of data are less than or equal to 57.09.
- (b) Determine the datum corresponding to a percentile rank of 0.9. In other words, determine  $x$  such that 90% of the data are less than or equal to  $x$ .
- (c) Determine the mean of the measurements.
- (d) Determine the median of the measurements.