1. Problem

A continuous random variable X was measured 12 times. The sorted data are shown below, along with each datum's index.

2 90.39 3 90.464 4 90.504 5 90.563 6 90.622 7 91.362 8 91.408 9 91.598 10 93.788	i	X
3 90.464 4 90.504 5 90.563 6 90.622 7 91.362 8 91.408 9 91.598 10 93.788	1	90.019
4 90.504 5 90.563 6 90.622 7 91.362 8 91.408 9 91.598 10 93.789	2	90.391
5 90.563 6 90.622 7 91.362 8 91.408 9 91.598 10 93.789	3	90.464
6 90.622 7 91.362 8 91.403 9 91.593 10 93.783	4	90.504
7 91.362 8 91.408 9 91.598 10 93.788	5	90.563
8 91.408 9 91.598 10 93.789	6	90.622
9 91.598 10 93.789	7	91.362
10 93.789	8	91.408
	9	91.598
11 0/ 10/	10	93.789
11 34.134	11	94.194
12 94.930	12	94.930

The total of the measurements is 1099.844.

- (a) Determine the percentile rank of the value 90.622. In other words, determine what percent of data are less than or equal to 90.622.
- (b) Determine the datum corresponding to a percentile rank of 0.167. In other words, determine x such that 16.7% 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 12 times. The sorted data are shown below.

20.417	20.561	20.601	20.900
	_0.00.		_0.00
21 105	22 179	23.152	23 364
21.100	22.175	20.102	20.004
24 772	26 642	27.260	20 201
24.773	20.042	27.200	20.304

The total of the measurements is 279.338.

- (a) Determine the percentile rank of the value 20.601. In other words, determine what percent of data are less than or equal to 20.601.
- (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.