1. **Problem**
   A continuous random variable X was measured 11 times. The sorted data are shown below, along with each datum's index.

i	x
1	40.041
2	40.437
3	40.535
4	40.771
5	42.226
6	42.309
7	42.645
8	43.672
9	43.943
10	46.308
11	46.787

   The total of the measurements is 469.674.

   (a) Determine the percentile rank of the value 40.535. In other words, determine what percent of data are less than or equal to 40.535.

   (b) Determine the datum corresponding to a percentile rank of 0.182. In other words, determine x such that 18.2% 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 36 times. The sorted data are shown below.

81.411	82.159	85.456	86.454	89.182	89.946	90.259	90.313	93.487
93.914	94.991	95.075	95.627	96.198	97.918	99.139	102.389	103.694
103.923	105.265	105.305	105.364	105.885	107.940	110.951	111.941	112.094
112.408	112.634	113.227	114.477	117.289	118.038	118.826	119.024	119.549

   The total of the measurements is 3681.752.

   (a) Determine the percentile rank of the value 85.456. In other words, determine what percent of data are less than or equal to 85.456.

   (b) Determine the datum corresponding to a percentile rank of 0.139. In other words, determine x such that 13.9% of the data are less than or equal to x.

   (c) Determine the mean of the measurements.

   (d) Determine the median of the measurements.

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	34.174
2	34.391
3	35.362
4	37.172
5	39.782
6	39.800

   The total of the measurements is 220.681.

   (a) Determine the percentile rank of the value 37.172. In other words, determine what percent of data are less than or equal to 37.172.

   (b) Determine the datum corresponding to a percentile rank of 0.5. In other words, determine x such that 50% 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 42 times. The sorted data are shown below.

33.400	33.682	33.688	34.237	34.440	34.936	35.725
36.027	36.342	37.344	37.349	37.538	39.163	41.378
41.665	41.673	42.405	42.485	43.993	44.105	45.403
48.103	51.134	53.006	53.335	53.383	54.782	57.391
57.940	60.499	63.020	63.558	66.321	68.386	68.749
72.049	72.208	80.773	82.174	86.961	91.604	95.894

The total of the measurements is 2208.248.

(a) Determine the percentile rank of the value 54.782. In other words, determine what percent of data are less than or equal to 54.782.

(b) Determine the datum corresponding to a percentile rank of 0.286. In other words, determine x such that 28.6% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

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

i	x
1	60.565
2	61.014
3	63.274
4	67.169
5	68.009
6	69.210
7	73.074
8	74.949
9	75.001
10	78.462
11	78.492
12	79.721

   The total of the measurements is 848.94.

   (a) Determine the percentile rank of the value 74.949. In other words, determine what percent of data are less than or equal to 74.949.

   (b) Determine the datum corresponding to a percentile rank of 0.333. In other words, determine x such that 33.3% 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 32 times. The sorted data are shown below.

30.028	30.091	30.191	30.343	30.397	30.414	30.438	30.640
30.721	30.928	30.936	30.948	30.998	31.040	31.071	31.164
31.250	31.333	31.398	31.517	31.548	31.679	31.694	31.845
32.275	32.398	32.415	32.652	32.876	33.074	34.101	34.293

The total of the measurements is 1006.696.

(a) Determine the percentile rank of the value 30.998. In other words, determine what percent of data are less than or equal to 30.998.

(b) Determine the datum corresponding to a percentile rank of 0.594. In other words, determine x such that 59.4% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

1. **Problem**
   A continuous random variable X was measured 10 times. The sorted data are shown below, along with each datum's index.

i	x
1	47.836
2	48.152
3	48.672
4	48.864
5	49.065
6	49.774
7	49.927
8	50.051
9	51.116
10	51.182

   The total of the measurements is 494.639.

   (a) Determine the percentile rank of the value 48.152. In other words, determine what percent of data are less than or equal to 48.152.

   (b) Determine the datum corresponding to a percentile rank of 0.7. In other words, determine x such that 70% 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.

50.049	50.693	50.775	50.815	51.425	51.459	51.536	51.721	51.857
51.937	52.271	52.320	52.698	52.740	52.797	52.966	53.055	53.154
53.651	53.840	53.849	54.441	54.611	54.619	54.853	54.942	55.072
55.344	55.441	55.454	55.481	55.634	55.780	56.178	56.213	56.389
56.601	56.641	56.657	57.076	57.176	57.188	57.212	57.343	57.344
57.404	57.773	57.798	58.002	58.470	59.057	59.401	59.515	59.814

The total of the measurements is 2966.532.

(a) Determine the percentile rank of the value 52.698. In other words, determine what percent of data are less than or equal to 52.698.

(b) Determine the datum corresponding to a percentile rank of 0.37. In other words, determine x such that 37% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

1. **Problem**
   A continuous random variable X was measured 7 times. The sorted data are shown below, along with each datum's index.

i	x
1	50.054
2	50.345
3	50.346
4	50.518
5	50.541
6	50.801
7	51.108

   The total of the measurements is 353.713.

   (a) Determine the percentile rank of the value 51.108. In other words, determine what percent of data are less than or equal to 51.108.

   (b) Determine the datum corresponding to a percentile rank of 0.571. In other words, determine x such that 57.1% 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.

79.797	84.381	85.532	86.464	87.889	92.695	93.270	94.187	94.377
95.673	95.945	96.020	96.359	96.510	96.526	96.581	96.659	96.805
97.142	97.215	97.665	98.024	98.052	99.371	99.554	99.649	100.105
100.704	100.817	101.010	102.582	102.827	103.065	103.351	103.606	104.491
104.930	105.044	105.157	105.591	105.975	106.438	106.541	106.578	107.132
107.361	107.385	107.794	107.936	108.209	108.409	108.430	108.534	109.155

The total of the measurements is 5401.499.

(a) Determine the percentile rank of the value 95.673. In other words, determine what percent of data are less than or equal to 95.673.

(b) Determine the datum corresponding to a percentile rank of 0.722. In other words, determine x such that 72.2% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

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

i	x
1	100.188
2	102.144
3	105.357
4	109.973
5	110.173
6	110.833
7	110.878
8	110.962
9	111.204
10	112.994
11	113.408
12	114.585

   The total of the measurements is 1312.699.

   (a) Determine the percentile rank of the value 111.204. In other words, determine what percent of data are less than or equal to 111.204.

   (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 63 times. The sorted data are shown below.

20.841	21.559	21.682	21.854	22.073	22.249	22.278	23.644	24.073
24.228	25.340	25.343	25.410	25.630	25.653	25.801	26.013	26.042
26.120	26.388	26.545	26.616	27.039	27.407	27.590	27.610	27.967
28.967	29.038	29.413	29.812	30.388	30.630	30.952	31.294	31.626
32.083	32.178	32.683	32.738	32.892	33.115	33.141	33.198	33.848
34.002	34.649	34.755	35.153	35.272	35.913	36.180	36.485	36.615
37.817	37.909	37.910	37.978	38.490	38.718	39.124	39.482	39.717

The total of the measurements is 1907.16.

(a) Determine the percentile rank of the value 22.249. In other words, determine what percent of data are less than or equal to 22.249.

(b) Determine the datum corresponding to a percentile rank of 0.762. In other words, determine x such that 76.2% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

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	11.195
2	11.344
3	11.466
4	11.594
5	11.845
6	11.865

   The total of the measurements is 69.309.

   (a) Determine the percentile rank of the value 11.594. In other words, determine what percent of data are less than or equal to 11.594.

   (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 40 times. The sorted data are shown below.

21.888	22.051	22.298	22.352	22.594	22.729	22.735	22.787
22.848	23.209	23.214	23.224	23.257	23.544	23.719	23.817
23.832	24.020	24.039	24.059	24.108	24.112	24.281	24.311
24.328	24.361	24.401	24.413	24.504	24.533	24.563	24.574
24.600	24.608	24.652	24.727	24.791	24.793	24.851	24.901

The total of the measurements is 952.628.

(a) Determine the percentile rank of the value 23.719. In other words, determine what percent of data are less than or equal to 23.719.

(b) Determine the datum corresponding to a percentile rank of 0.5. In other words, determine x such that 50% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

1. **Problem**
   A continuous random variable X was measured 8 times. The sorted data are shown below, along with each datum's index.

i	x
1	13.902
2	20.014
3	23.009
4	24.960
5	25.610
6	26.274
7	27.237
8	29.150

   The total of the measurements is 190.156.

   (a) Determine the percentile rank of the value 24.96. In other words, determine what percent of data are less than or equal to 24.96.

   (b) Determine the datum corresponding to a percentile rank of 0.875. In other words, determine x such that 87.5% of the data are less than or equal to x.

   (c) Determine the mean of the measurements.

   (d) Determine the median of the measurements.

2. **Problem**
A continuous random variable X was measured 81 times. The sorted data are shown below.

90.016	90.026	90.027	90.041	90.041	90.049	90.067	90.072	90.085
90.090	90.121	90.153	90.179	90.186	90.201	90.202	90.205	90.269
90.288	90.298	90.303	90.309	90.313	90.318	90.330	90.335	90.378
90.406	90.409	90.416	90.429	90.456	90.465	90.478	90.493	90.505
90.517	90.521	90.535	90.537	90.538	90.549	90.563	90.568	90.579
90.582	90.589	90.615	90.627	90.629	90.633	90.641	90.746	90.829
90.845	90.848	90.867	90.873	90.876	90.886	90.897	90.955	90.968
90.986	91.009	91.011	91.013	91.061	91.085	91.126	91.162	91.177
91.431	91.562	91.642	91.702	91.706	91.918	91.964	91.966	92.432

The total of the measurements is 7343.725.

(a) Determine the percentile rank of the value 90.627. In other words, determine what percent of data are less than or equal to 90.627.

(b) Determine the datum corresponding to a percentile rank of 0.654. In other words, determine x such that 65.4% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

1. **Problem**
   A continuous random variable X was measured 9 times. The sorted data are shown below, along with each datum's index.

i	x
1	13.279
2	14.324
3	14.507
4	14.915
5	15.304
6	15.450
7	15.612
8	15.951
9	16.240

   The total of the measurements is 135.582.

   (a) Determine the percentile rank of the value 14.507. In other words, determine what percent of data are less than or equal to 14.507.

   (b) Determine the datum corresponding to a percentile rank of 0.889. In other words, determine x such that 88.9% 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 25 times. The sorted data are shown below.

50.536	50.559	50.773	51.439	52.026
52.181	52.445	52.515	53.387	54.933
56.037	56.976	57.891	57.989	58.322
58.730	59.109	59.175	60.956	65.156
69.002	69.474	69.945	70.831	72.521

The total of the measurements is 1462.908.

(a) Determine the percentile rank of the value 60.956. In other words, determine what percent of data are less than or equal to 60.956.

(b) Determine the datum corresponding to a percentile rank of 0.04. In other words, determine x such that 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.

1. **Problem**
   A continuous random variable X was measured 7 times. The sorted data are shown below, along with each datum's index.

i	x
1	50.165
2	50.619
3	50.940
4	51.471
5	52.323
6	52.524
7	52.885

   The total of the measurements is 360.927.

   (a) Determine the percentile rank of the value 51.471. In other words, determine what percent of data are less than or equal to 51.471.

   (b) Determine the datum corresponding to a percentile rank of 0.714. In other words, determine x such that 71.4% of the data are less than or equal to x.

   (c) Determine the mean of the measurements.

   (d) Determine the median of the measurements.

2. **Problem**
   A continuous random variable X was measured 45 times. The sorted data are shown below.

80.189	80.499	81.941	83.450	87.152	92.734	93.184	94.057	94.746
94.823	95.521	95.616	95.770	98.633	98.804	99.797	100.563	100.612
102.234	102.404	102.475	102.603	102.616	102.913	102.979	104.764	107.084
111.589	112.207	112.383	116.412	121.764	122.378	124.508	127.419	129.019
131.390	132.134	134.409	137.548	143.706	144.108	145.319	149.384	152.250

   The total of the measurements is 4946.09.

   (a) Determine the percentile rank of the value 124.508. In other words, determine what percent of data are less than or equal to 124.508.

   (b) Determine the datum corresponding to a percentile rank of 0.844. In other words, determine x such that 84.4% of the data are less than or equal to x.

   (c) Determine the mean of the measurements.

   (d) Determine the median of the measurements.

1. **Problem**
   A continuous random variable X was measured 7 times. The sorted data are shown below, along with each datum's index.

i	x
1	10.897
2	11.229
3	11.428
4	11.452
5	14.252
6	14.374
7	14.933

   The total of the measurements is 88.565.

   (a) Determine the percentile rank of the value 11.229. In other words, determine what percent of data are less than or equal to 11.229.

   (b) Determine the datum corresponding to a percentile rank of 0.714. In other words, determine x such that 71.4% of the data are less than or equal to x.

   (c) Determine the mean of the measurements.

   (d) Determine the median of the measurements.

2. **Problem**
A continuous random variable X was measured 16 times. The sorted data are shown below.

116.761	124.910	125.464	127.302
146.729	148.974	149.100	156.212
163.237	176.018	178.863	180.152
184.652	186.261	186.971	187.248

The total of the measurements is 2538.854.

(a) Determine the percentile rank of the value 149.1. In other words, determine what percent of data are less than or equal to 149.1.

(b) Determine the datum corresponding to a percentile rank of 0.812. In other words, determine x such that 81.2% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

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.

1. **Problem**
   A continuous random variable X was measured 7 times. The sorted data are shown below, along with each datum's index.

i	x
1	10.817
2	10.899
3	11.409
4	11.734
5	12.212
6	13.400
7	13.821

   The total of the measurements is 84.292.

   (a) Determine the percentile rank of the value 11.409. In other words, determine what percent of data are less than or equal to 11.409.

   (b) Determine the datum corresponding to a percentile rank of 0.143. In other words, determine x such that 14.3% 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 56 times. The sorted data are shown below.

60.003	60.025	60.038	60.070	60.084	60.222	60.234	60.241
60.263	60.367	60.381	60.564	60.803	60.820	60.839	60.952
61.667	61.668	61.789	61.897	62.219	62.988	62.988	63.147
64.090	64.479	64.502	65.160	65.529	65.715	65.982	65.992
66.064	66.121	66.221	66.519	66.598	66.632	66.648	66.739
66.792	67.933	68.284	68.351	68.591	68.715	68.881	69.320
69.413	69.513	69.557	69.693	69.775	69.840	69.870	69.874

The total of the measurements is 3621.662.

(a) Determine the percentile rank of the value 66.121. In other words, determine what percent of data are less than or equal to 66.121.

(b) Determine the datum corresponding to a percentile rank of 0.964. In other words, determine x such that 96.4% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

1. **Problem**
   A continuous random variable X was measured 9 times. The sorted data are shown below, along with each datum's index.

i	x
1	91.417
2	92.411
3	93.803
4	94.713
5	94.766
6	97.474
7	99.781
8	99.880
9	99.883

   The total of the measurements is 864.128.

   (a) Determine the percentile rank of the value 94.713. In other words, determine what percent of data are less than or equal to 94.713.

   (b) Determine the datum corresponding to a percentile rank of 0.889. In other words, determine x such that 88.9% 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 28 times. The sorted data are shown below.

40.022	40.030	40.058	40.164	40.166	40.220	40.231
40.302	40.343	40.374	40.451	40.477	40.613	40.767
40.882	40.899	40.923	40.923	40.958	41.140	41.151
41.226	41.377	41.615	41.630	41.693	42.040	42.285

The total of the measurements is 1142.96.

(a) Determine the percentile rank of the value 40.767. In other words, determine what percent of data are less than or equal to 40.767.

(b) Determine the datum corresponding to a percentile rank of 0.536. In other words, determine x such that 53.6% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

1. **Problem**
   A continuous random variable X was measured 10 times. The sorted data are shown below, along with each datum's index.

i	x
1	70.070
2	70.302
3	70.659
4	70.679
5	71.067
6	71.204
7	71.477
8	71.551
9	72.056
10	72.467

   The total of the measurements is 711.532.

   (a) Determine the percentile rank of the value 72.056. In other words, determine what percent of data are less than or equal to 72.056.

   (b) Determine the datum corresponding to a percentile rank of 0.3. In other words, determine x such that 30% 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 30 times. The sorted data are shown below.

70.435	71.095	72.354	73.316	74.134	74.202
76.263	76.879	77.837	77.950	78.256	79.734
81.312	84.558	88.444	88.770	89.462	90.960
91.539	94.113	95.990	100.747	101.468	102.049
103.356	109.683	111.850	124.776	124.888	129.250

The total of the measurements is 2715.67.

(a) Determine the percentile rank of the value 76.879. In other words, determine what percent of data are less than or equal to 76.879.

(b) Determine the datum corresponding to a percentile rank of 0.867. In other words, determine x such that 86.7% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

1. **Problem**
   A continuous random variable X was measured 7 times. The sorted data are shown below, along with each datum's index.

i	x
1	89.362
2	109.769
3	114.007
4	123.896
5	131.192
6	131.964
7	138.697

   The total of the measurements is 838.887.

   (a) Determine the percentile rank of the value 138.697. In other words, determine what percent of data are less than or equal to 138.697.

   (b) Determine the datum corresponding to a percentile rank of 0.571. In other words, determine x such that 57.1% 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 36 times. The sorted data are shown below.

70.001	70.002	70.003	70.034	70.038	70.044
70.084	70.096	70.119	70.120	70.150	70.308
70.562	70.594	70.623	70.654	70.676	70.782
71.117	71.546	71.594	71.695	71.910	71.959
72.291	72.447	72.601	72.611	72.688	72.734
72.769	72.810	72.924	72.966	72.971	72.971

The total of the measurements is 2567.494.

(a) Determine the percentile rank of the value 70.676. In other words, determine what percent of data are less than or equal to 70.676.

(b) Determine the datum corresponding to a percentile rank of 0.528. In other words, determine x such that 52.8% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

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.

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

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.

1. **Problem**
   A continuous random variable X was measured 11 times. The sorted data are shown below, along with each datum's index.

i	x
1	40.365
2	40.918
3	45.367
4	45.657
5	46.180
6	46.399
7	46.742
8	47.015
9	47.439
10	47.781
11	47.903

   The total of the measurements is 501.766.

   (a) Determine the percentile rank of the value 46.399. In other words, determine what percent of data are less than or equal to 46.399.

   (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 28 times. The sorted data are shown below.

50.008	50.048	50.078	50.108	50.112	50.181	50.184
50.288	50.467	50.574	50.602	50.828	51.351	51.833
51.961	52.448	52.690	52.730	52.733	52.736	52.782
52.811	52.827	52.872	52.951	52.958	52.960	52.971

The total of the measurements is 1445.092.

(a) Determine the percentile rank of the value 51.351. In other words, determine what percent of data are less than or equal to 51.351.

(b) Determine the datum corresponding to a percentile rank of 0.643. In other words, determine x such that 64.3% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

1. **Problem**
   A continuous random variable X was measured 10 times. The sorted data are shown below, along with each datum's index.

i	x
1	30.209
2	30.220
3	30.548
4	30.960
5	31.451
6	31.458
7	31.670
8	31.674
9	32.298
10	36.652

   The total of the measurements is 317.14.

   (a) Determine the percentile rank of the value 30.209. In other words, determine what percent of data are less than or equal to 30.209.

   (b) Determine the datum corresponding to a percentile rank of 0.8. In other words, determine x such that 80% 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 32 times. The sorted data are shown below.

10.002	10.009	10.075	10.168	10.188	10.258	10.262	10.284
10.392	10.454	10.754	10.847	11.094	11.138	11.418	12.176
12.361	12.658	13.011	13.045	13.502	13.559	13.964	14.138
14.302	14.674	14.826	14.830	14.854	14.928	14.933	14.950

The total of the measurements is 394.054.

(a) Determine the percentile rank of the value 14.83. In other words, determine what percent of data are less than or equal to 14.83.

(b) Determine the datum corresponding to a percentile rank of 0.344. In other words, determine x such that 34.4% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

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	20.953
2	21.603
3	21.937
4	22.218
5	22.639
6	22.902

   The total of the measurements is 132.252.

   (a) Determine the percentile rank of the value 21.937. In other words, determine what percent of data are less than or equal to 21.937.

   (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 28 times. The sorted data are shown below.

10.072	10.170	10.782	10.993	11.757	11.935	12.663
12.980	13.109	13.316	13.547	13.673	14.082	14.825
15.193	15.273	15.929	17.696	17.721	18.835	18.914
20.076	20.735	20.744	20.861	22.097	25.004	25.413

The total of the measurements is 448.395.

(a) Determine the percentile rank of the value 11.757. In other words, determine what percent of data are less than or equal to 11.757.

(b) Determine the datum corresponding to a percentile rank of 0.429. In other words, determine x such that 42.9% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

1. **Problem**
   A continuous random variable X was measured 11 times. The sorted data are shown below, along with each datum's index.

i	x
1	21.041
2	21.232
3	21.284
4	21.364
5	21.421
6	21.463
7	21.539
8	21.606
9	21.745
10	21.807
11	22.017

   The total of the measurements is 236.519.

   (a) Determine the percentile rank of the value 22.017. In other words, determine what percent of data are less than or equal to 22.017.

   (b) Determine the datum corresponding to a percentile rank of 0.364. In other words, determine x such that 36.4% of the data are less than or equal to x.

   (c) Determine the mean of the measurements.

   (d) Determine the median of the measurements.

2. **Problem**
A continuous random variable X was measured 40 times. The sorted data are shown below.

41.086	41.125	41.138	41.139	41.163	41.191	41.199	41.217
41.251	41.263	41.313	41.357	41.374	41.391	41.396	41.412
41.419	41.421	41.456	41.463	41.475	41.487	41.496	41.500
41.505	41.514	41.540	41.544	41.590	41.593	41.608	41.646
41.689	41.691	41.753	41.827	41.850	41.857	41.954	42.039

The total of the measurements is 1658.932.

(a) Determine the percentile rank of the value 41.753. In other words, determine what percent of data are less than or equal to 41.753.

(b) Determine the datum corresponding to a percentile rank of 0.3. In other words, determine x such that 30% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

1. **Problem**
   A continuous random variable X was measured 11 times. The sorted data are shown below, along with each datum's index.

i	x
1	20.033
2	20.036
3	20.424
4	20.505
5	20.796
6	20.839
7	20.952
8	20.983
9	21.017
10	21.323
11	21.517

   The total of the measurements is 228.425.

   (a) Determine the percentile rank of the value 20.796. In other words, determine what percent of data are less than or equal to 20.796.

   (b) Determine the datum corresponding to a percentile rank of 0.909. In other words, determine x such that 90.9% 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 49 times. The sorted data are shown below.

31.055	31.681	31.702	31.758	31.860	31.932	32.018
32.156	32.310	32.503	32.770	32.842	32.966	32.996
33.055	33.073	33.233	33.239	33.247	33.251	33.265
33.302	33.378	33.473	33.542	33.555	33.616	33.648
33.724	33.757	33.783	33.908	34.020	34.034	34.123
34.242	34.301	34.318	34.373	34.577	34.610	34.687
34.692	34.695	34.740	34.772	34.789	34.924	34.927

The total of the measurements is 1639.422.

(a) Determine the percentile rank of the value 34.692. In other words, determine what percent of data are less than or equal to 34.692.

(b) Determine the datum corresponding to a percentile rank of 0.204. In other words, determine x such that 20.4% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.