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	62.136
2	69.665
3	70.557
4	70.792
5	71.175
6	71.358
7	72.011
8	72.786
9	77.432

   The total of the measurements is 637.912.

   (a) Determine the percentile rank of the value 70.557. In other words, determine what percent of data are less than or equal to 70.557.

   (b) Determine the datum corresponding to a percentile rank of 0.778. In other words, determine x such that 77.8% of the data are less than or equal to x.

   (c) Determine the mean of the measurements.

   (d) Determine the median of the measurements.

2. **Problem**
A continuous random variable X was measured 63 times. The sorted data are shown below.

51.393	52.819	52.890	52.960	53.474	53.606	55.032	55.044	55.288
55.415	55.477	55.657	55.819	55.841	55.846	56.290	56.418	56.509
56.679	56.759	57.135	57.166	57.260	57.477	57.658	57.761	57.788
57.876	57.999	58.099	58.175	58.240	58.319	58.348	58.408	58.526
58.631	58.641	58.697	58.709	58.716	58.750	58.763	58.851	58.854
58.952	58.988	59.009	59.010	59.010	59.117	59.119	59.185	59.267
59.297	59.352	59.434	59.478	59.648	59.761	59.763	59.868	59.874

The total of the measurements is 3622.195.

(a) Determine the percentile rank of the value 55.032. In other words, determine what percent of data are less than or equal to 55.032.

(b) Determine the datum corresponding to a percentile rank of 0.556. In other words, determine x such that 55.6% 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 9 times. The sorted data are shown below, along with each datum's index.

i	x
1	50.003
2	50.045
3	50.404
4	50.411
5	50.686
6	50.799
7	50.917
8	51.765
9	52.050

   The total of the measurements is 457.08.

   (a) Determine the percentile rank of the value 50.917. In other words, determine what percent of data are less than or equal to 50.917.

   (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 30 times. The sorted data are shown below.

94.352	100.517	105.579	106.461	108.373	122.275
123.399	124.990	126.490	129.271	134.950	143.016
144.260	145.752	149.057	149.401	149.605	152.991
153.478	156.021	157.681	157.880	160.777	160.915
162.116	162.930	165.293	165.612	167.331	168.803

The total of the measurements is 4249.576.

(a) Determine the percentile rank of the value 165.293. In other words, determine what percent of data are less than or equal to 165.293.

(b) Determine the datum corresponding to a percentile rank of 0.633. In other words, determine x such that 63.3% 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 6 times. The sorted data are shown below, along with each datum's index.

i	x
1	21.563
2	27.973
3	29.211
4	30.211
5	31.088
6	31.559

   The total of the measurements is 171.605.

   (a) Determine the percentile rank of the value 21.563. In other words, determine what percent of data are less than or equal to 21.563.

   (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 28 times. The sorted data are shown below.

50.003	50.078	50.082	50.219	50.300	50.300	50.922
51.303	51.366	51.499	51.558	51.729	52.005	52.130
52.179	52.781	53.221	53.435	53.599	53.870	53.971
54.293	54.560	54.600	54.690	54.869	54.908	54.948

The total of the measurements is 1469.418.

(a) Determine the percentile rank of the value 51.558. In other words, determine what percent of data are less than or equal to 51.558.

(b) Determine the datum corresponding to a percentile rank of 0.786. In other words, determine x such that 78.6% 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 11 times. The sorted data are shown below, along with each datum's index.

i	x
1	70.055
2	70.086
3	70.293
4	70.624
5	70.695
6	70.956
7	71.697
8	71.781
9	72.293
10	72.956
11	72.962

   The total of the measurements is 784.398.

   (a) Determine the percentile rank of the value 71.781. In other words, determine what percent of data are less than or equal to 71.781.

   (b) Determine the datum corresponding to a percentile rank of 0.636. In other words, determine x such that 63.6% of the data are less than or equal to x.

   (c) Determine the mean of the measurements.

   (d) Determine the median of the measurements.

2. **Problem**
A continuous random variable X was measured 32 times. The sorted data are shown below.

20.197	20.347	20.374	20.450	20.484	20.665	20.811	20.811
21.131	21.166	21.289	21.544	21.731	21.876	21.942	21.950
21.956	22.120	22.161	22.211	22.262	22.300	23.889	23.958
24.833	25.136	25.242	25.303	25.530	25.625	26.223	26.267

The total of the measurements is 721.784.

(a) Determine the percentile rank of the value 22.3. In other words, determine what percent of data are less than or equal to 22.3.

(b) Determine the datum corresponding to a percentile rank of 0.0625. In other words, determine x such that 6.25% 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	21.271
2	22.346
3	22.408
4	26.111
5	28.367
6	30.847
7	31.464
8	38.058
9	38.106

   The total of the measurements is 258.978.

   (a) Determine the percentile rank of the value 21.271. In other words, determine what percent of data are less than or equal to 21.271.

   (b) Determine the datum corresponding to a percentile rank of 0.222. In other words, determine x such that 22.2% 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 30 times. The sorted data are shown below.

60.458	61.133	63.198	63.795	64.229	65.359
65.486	68.269	72.829	73.852	74.909	75.251
76.372	76.889	76.914	86.112	86.369	87.722
87.887	89.151	89.930	90.764	90.785	92.222
99.385	100.905	100.975	105.996	114.840	115.660

The total of the measurements is 2477.646.

(a) Determine the percentile rank of the value 76.914. In other words, determine what percent of data are less than or equal to 76.914.

(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.

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	41.852
2	42.606
3	42.986
4	43.023
5	43.569
6	43.736
7	43.942
8	44.227
9	44.354
10	44.385
11	44.860

   The total of the measurements is 479.54.

   (a) Determine the percentile rank of the value 43.569. In other words, determine what percent of data are less than or equal to 43.569.

   (b) Determine the datum corresponding to a percentile rank of 0.727. In other words, determine x such that 72.7% 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 35 times. The sorted data are shown below.

70.696	71.661	74.010	75.000	75.077	75.147	75.420
78.056	83.739	85.889	86.022	87.356	89.209	90.095
91.306	91.623	92.396	93.200	93.637	94.323	95.201
96.122	96.758	97.152	99.480	100.429	102.139	102.550
102.951	104.752	105.043	105.840	106.561	107.458	107.755

The total of the measurements is 3204.053.

(a) Determine the percentile rank of the value 83.739. In other words, determine what percent of data are less than or equal to 83.739.

(b) Determine the datum corresponding to a percentile rank of 0.343. In other words, determine x such that 34.3% 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 8 times. The sorted data are shown below, along with each datum's index.

i	x
1	63.373
2	63.820
3	65.782
4	67.427
5	67.819
6	68.153
7	69.450
8	69.754

   The total of the measurements is 535.578.

   (a) Determine the percentile rank of the value 63.373. In other words, determine what percent of data are less than or equal to 63.373.

   (b) Determine the datum corresponding to a percentile rank of 0.625. In other words, determine x such that 62.5% 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 32 times. The sorted data are shown below.

30.156	30.626	31.250	31.341	32.083	32.520	32.598	32.607
32.854	32.976	34.028	34.182	34.528	35.271	35.529	36.869
37.554	39.009	39.056	39.285	39.799	39.868	41.096	42.372
44.427	45.070	45.147	45.655	46.139	46.468	46.548	47.869

The total of the measurements is 1214.78.

(a) Determine the percentile rank of the value 35.271. In other words, determine what percent of data are less than or equal to 35.271.

(b) Determine the datum corresponding to a percentile rank of 0.188. In other words, determine x such that 18.8% 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 12 times. The sorted data are shown below, along with each datum's index.

i	x
1	70.375
2	70.486
3	72.350
4	73.393
5	75.008
6	77.294
7	77.424
8	78.655
9	82.604
10	84.284
11	86.610
12	87.168

   The total of the measurements is 935.651.

   (a) Determine the percentile rank of the value 77.424. In other words, determine what percent of data are less than or equal to 77.424.

   (b) Determine the datum corresponding to a percentile rank of 0.917. In other words, determine x such that 91.7% 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 24 times. The sorted data are shown below.

90.052	90.102	90.464	90.765	90.831	90.928
90.972	92.344	92.536	93.590	93.839	94.291
94.824	95.098	95.629	95.986	96.227	96.239
96.250	96.402	98.553	99.754	99.843	99.869

The total of the measurements is 2265.388.

(a) Determine the percentile rank of the value 95.098. In other words, determine what percent of data are less than or equal to 95.098.

(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.

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	80.223
2	80.531
3	81.494
4	82.669
5	83.011
6	87.131
7	87.231
8	88.949
9	91.918
10	92.101

   The total of the measurements is 855.258.

   (a) Determine the percentile rank of the value 81.494. In other words, determine what percent of data are less than or equal to 81.494.

   (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 42 times. The sorted data are shown below.

10.003	10.036	10.091	11.137	11.354	11.808	11.861
12.100	12.451	12.976	13.393	15.171	15.574	15.943
16.332	16.680	17.100	17.241	17.345	17.595	18.180
19.605	20.020	20.581	22.183	23.628	24.394	26.533
26.623	26.907	27.072	27.362	28.168	28.629	28.685
29.063	29.119	29.325	29.553	29.677	29.790	29.796

The total of the measurements is 851.084.

(a) Determine the percentile rank of the value 12.976. In other words, determine what percent of data are less than or equal to 12.976.

(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.

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	60.074
2	60.107
3	60.234
4	61.030
5	62.418
6	62.500
7	63.034
8	63.457
9	63.582
10	64.135
11	64.194
12	64.207

   The total of the measurements is 748.972.

   (a) Determine the percentile rank of the value 62.5. In other words, determine what percent of data are less than or equal to 62.5.

   (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 24 times. The sorted data are shown below.

40.035	40.499	40.608	40.776	40.878	42.274
42.380	42.811	42.902	43.163	43.692	43.922
45.092	45.220	47.087	47.361	47.434	47.546
47.934	48.024	48.820	48.998	49.309	49.387

The total of the measurements is 1076.152.

(a) Determine the percentile rank of the value 45.092. In other words, determine what percent of data are less than or equal to 45.092.

(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.

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	33.793
2	33.859
3	34.485
4	35.256
5	37.884
6	38.888
7	39.625
8	41.054
9	41.369
10	45.096
11	46.391
12	57.322

   The total of the measurements is 485.022.

   (a) Determine the percentile rank of the value 41.054. In other words, determine what percent of data are less than or equal to 41.054.

   (b) Determine the datum corresponding to a percentile rank of 0.417. In other words, determine x such that 41.7% 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 81 times. The sorted data are shown below.

20.082	20.143	20.165	20.203	20.310	20.357	20.374	20.385	20.396
20.463	20.480	20.506	20.556	20.587	20.608	20.675	20.684	20.801
20.899	20.950	21.049	21.095	21.121	21.125	21.170	21.263	21.302
21.454	21.584	21.651	21.843	21.912	21.936	22.074	22.134	22.181
22.340	22.340	22.448	22.575	22.594	22.726	22.867	22.874	22.984
23.051	23.059	23.095	23.241	23.249	23.325	23.411	23.481	23.495
23.495	23.576	23.588	23.658	23.667	23.702	23.770	23.773	23.830
23.867	24.027	24.135	24.217	24.362	24.448	24.621	24.638	24.918
25.607	25.826	25.851	25.878	26.454	26.564	27.030	27.660	29.004

The total of the measurements is 1839.839.

(a) Determine the percentile rank of the value 23.658. In other words, determine what percent of data are less than or equal to 23.658.

(b) Determine the datum corresponding to a percentile rank of 0.938. In other words, determine x such that 93.8% 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 9 times. The sorted data are shown below, along with each datum's index.

i	x
1	90.060
2	90.209
3	91.282
4	91.889
5	92.348
6	92.475
7	92.576
8	92.647
9	92.971

   The total of the measurements is 826.457.

   (a) Determine the percentile rank of the value 90.209. In other words, determine what percent of data are less than or equal to 90.209.

   (b) Determine the datum corresponding to a percentile rank of 0.667. In other words, determine x such that 66.7% 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 72 times. The sorted data are shown below.

90.055	90.162	90.318	90.652	90.699	90.767	90.852	90.904	91.261
91.266	91.270	91.375	91.410	91.431	91.487	91.507	91.857	91.922
92.239	92.313	92.364	92.457	92.757	92.835	92.857	92.895	92.994
93.120	93.356	93.414	93.479	93.497	93.558	93.746	93.846	93.887
94.050	94.096	94.139	94.204	94.265	94.272	94.410	94.649	94.788
94.866	94.897	95.034	95.071	95.502	95.775	95.938	96.167	96.699
97.263	97.350	97.685	97.762	98.338	99.236	99.431	99.571	100.367
101.615	102.300	102.864	103.695	103.820	104.059	104.259	105.528	106.014

   The total of the measurements is 6844.788.

   (a) Determine the percentile rank of the value 91.27. In other words, determine what percent of data are less than or equal to 91.27.

   (b) Determine the datum corresponding to a percentile rank of 0.583. In other words, determine x such that 58.3% 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 7 times. The sorted data are shown below, along with each datum's index.

i	x
1	63.703
2	68.636
3	74.100
4	76.338
5	77.105
6	77.246
7	79.730

   The total of the measurements is 516.858.

   (a) Determine the percentile rank of the value 74.1. In other words, determine what percent of data are less than or equal to 74.1.

   (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.

2. **Problem**
A continuous random variable X was measured 63 times. The sorted data are shown below.

43.644	48.819	51.071	55.871	57.547	58.788	59.343	60.483	62.606
64.802	64.921	64.921	65.319	65.535	65.657	65.925	65.969	65.978
66.232	66.865	67.207	67.819	68.065	68.704	68.937	69.001	69.235
69.432	70.107	70.173	70.269	70.334	71.099	71.211	71.883	72.011
72.116	72.364	72.449	72.490	72.654	72.815	72.982	73.471	73.654
74.328	74.587	74.715	75.324	76.071	76.551	76.633	76.872	77.359
77.421	78.027	78.219	78.697	78.994	79.289	79.300	79.413	79.493

The total of the measurements is 4382.071.

(a) Determine the percentile rank of the value 68.704. In other words, determine what percent of data are less than or equal to 68.704.

(b) Determine the datum corresponding to a percentile rank of 0.254. In other words, determine x such that 25.4% 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	57.407
2	57.512
3	58.406
4	58.557
5	59.222
6	59.858
7	60.065
8	60.146
9	60.316
10	61.457

   The total of the measurements is 592.946.

   (a) Determine the percentile rank of the value 60.065. In other words, determine what percent of data are less than or equal to 60.065.

   (b) Determine the datum corresponding to a percentile rank of 0.4. In other words, determine x such that 40% 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 48 times. The sorted data are shown below.

11.166	11.190	11.223	11.227	11.231	11.231	11.238	11.263
11.265	11.266	11.274	11.280	11.305	11.306	11.310	11.317
11.320	11.337	11.341	11.347	11.365	11.374	11.379	11.386
11.392	11.444	11.457	11.462	11.515	11.520	11.536	11.553
11.566	11.600	11.614	11.635	11.663	11.665	11.733	11.752
11.761	11.773	11.791	11.818	11.925	11.967	11.975	12.038

The total of the measurements is 551.096.

(a) Determine the percentile rank of the value 11.265. In other words, determine what percent of data are less than or equal to 11.265.

(b) Determine the datum corresponding to a percentile rank of 0.646. In other words, determine x such that 64.6% 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	106.466
2	111.215
3	114.053
4	123.235
5	124.523
6	125.213
7	133.573
8	142.283
9	144.129
10	148.700

   The total of the measurements is 1273.39.

   (a) Determine the percentile rank of the value 144.129. In other words, determine what percent of data are less than or equal to 144.129.

   (b) Determine the datum corresponding to a percentile rank of 0.4. In other words, determine x such that 40% 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.

105.369	105.935	106.389	109.280	111.145
115.456	116.357	116.597	116.709	117.071
117.657	117.696	117.707	118.344	118.795
119.272	119.489	119.620	121.749	123.415
124.244	124.569	125.523	126.228	140.168

The total of the measurements is 2954.784.

(a) Determine the percentile rank of the value 119.489. In other words, determine what percent of data are less than or equal to 119.489.

(b) Determine the datum corresponding to a percentile rank of 0.56. In other words, determine x such that 56% 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	91.776
2	91.824
3	92.159
4	92.440
5	92.622
6	92.740

   The total of the measurements is 553.561.

   (a) Determine the percentile rank of the value 92.74. In other words, determine what percent of data are less than or equal to 92.74.

   (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 24 times. The sorted data are shown below.

60.079	60.233	60.667	61.365	61.512	61.638
62.120	62.992	65.709	66.329	66.449	66.773
66.853	67.240	67.429	67.961	68.512	68.889
70.881	71.724	74.282	83.107	85.764	89.717

The total of the measurements is 1638.225.

(a) Determine the percentile rank of the value 74.282. In other words, determine what percent of data are less than or equal to 74.282.

(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.

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	20.423
2	20.554
3	21.018
4	21.349
5	21.559
6	21.941
7	22.880
8	28.054
9	29.714
10	30.135
11	34.454

   The total of the measurements is 272.081.

   (a) Determine the percentile rank of the value 21.349. In other words, determine what percent of data are less than or equal to 21.349.

   (b) Determine the datum corresponding to a percentile rank of 0.818. In other words, determine x such that 81.8% of the data are less than or equal to x.

   (c) Determine the mean of the measurements.

   (d) Determine the median of the measurements.

2. **Problem**
A continuous random variable X was measured 56 times. The sorted data are shown below.

80.064	80.109	80.417	80.476	80.532	80.728	80.962	81.088
81.552	82.149	82.321	82.533	82.851	82.892	82.978	83.077
83.172	83.261	83.651	84.035	84.135	84.756	84.997	85.139
85.313	85.351	85.490	85.612	85.665	86.043	86.110	86.254
86.729	86.794	86.833	87.035	87.228	87.251	87.652	87.773
87.863	88.104	88.164	88.227	88.255	88.439	88.578	88.613
88.806	89.014	89.143	89.310	89.343	89.555	89.573	89.676

The total of the measurements is 4781.671.

(a) Determine the percentile rank of the value 85.313. In other words, determine what percent of data are less than or equal to 85.313.

(b) Determine the datum corresponding to a percentile rank of 0.839. In other words, determine x such that 83.9% 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	92.036
2	92.560
3	94.195
4	94.230
5	95.002
6	99.254

   The total of the measurements is 567.277.

   (a) Determine the percentile rank of the value 92.56. In other words, determine what percent of data are less than or equal to 92.56.

   (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 36 times. The sorted data are shown below.

10.638	14.290	14.941	17.053	17.935	21.014	25.684	29.387	37.748
42.040	48.787	52.886	54.673	54.913	56.175	58.544	60.929	62.632
62.762	62.765	64.381	64.802	65.863	69.335	70.369	71.346	71.729
75.620	83.258	86.121	93.010	95.162	102.952	106.691	107.033	107.873

The total of the measurements is 2141.341.

(a) Determine the percentile rank of the value 48.787. In other words, determine what percent of data are less than or equal to 48.787.

(b) Determine the datum corresponding to a percentile rank of 0.694. In other words, determine x such that 69.4% 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 8 times. The sorted data are shown below, along with each datum's index.

i	x
1	40.002
2	40.130
3	40.547
4	40.813
5	40.960
6	42.070
7	42.253
8	42.460

   The total of the measurements is 329.235.

   (a) Determine the percentile rank of the value 42.46. In other words, determine what percent of data are less than or equal to 42.46.

   (b) Determine the datum corresponding to a percentile rank of 0.25. In other words, determine x such that 25% 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.

42.436	42.806	43.861	43.885	44.244	44.331	45.014	45.262	45.513
45.789	46.743	46.820	47.060	47.312	47.426	48.134	48.319	48.656
49.039	49.056	49.221	49.367	49.398	49.448	49.824	50.204	50.561
50.829	50.949	51.050	51.219	51.432	51.662	51.732	51.904	51.952
52.084	52.385	53.043	53.119	53.440	53.670	53.946	54.348	55.539

The total of the measurements is 2214.032.

(a) Determine the percentile rank of the value 53.043. In other words, determine what percent of data are less than or equal to 53.043.

(b) Determine the datum corresponding to a percentile rank of 0.578. In other words, determine x such that 57.8% 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	20.159
2	20.724
3	23.376
4	25.837
5	26.186
6	29.889

   The total of the measurements is 146.171.

   (a) Determine the percentile rank of the value 20.159. In other words, determine what percent of data are less than or equal to 20.159.

   (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 16 times. The sorted data are shown below.

63.997	66.350	68.423	68.808
69.380	70.678	77.938	79.842
90.283	94.409	107.041	111.125
114.149	121.328	126.050	139.148

The total of the measurements is 1468.949.

(a) Determine the percentile rank of the value 90.283. In other words, determine what percent of data are less than or equal to 90.283.

(b) Determine the datum corresponding to a percentile rank of 0.375. In other words, determine x such that 37.5% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

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	77.718
2	92.739
3	93.383
4	95.276
5	99.918
6	103.975
7	104.728

   The total of the measurements is 667.737.

   (a) Determine the percentile rank of the value 103.975. In other words, determine what percent of data are less than or equal to 103.975.

   (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 63 times. The sorted data are shown below.

49.805	60.832	69.189	72.783	73.518	76.477	76.923	78.061	81.479
84.635	85.254	85.447	85.964	88.593	89.477	90.473	91.231	91.896
92.032	94.026	94.914	96.365	96.798	100.943	102.581	103.080	103.244
103.596	104.436	105.153	105.639	106.869	107.405	108.894	110.836	111.713
111.965	112.403	113.359	113.544	114.025	115.753	116.135	117.431	117.451
117.452	117.638	118.069	118.201	118.343	118.561	119.959	120.002	120.259
121.530	122.920	124.308	124.512	124.716	124.733	126.171	126.411	127.518

The total of the measurements is 6503.93.

(a) Determine the percentile rank of the value 120.259. In other words, determine what percent of data are less than or equal to 120.259.

(b) Determine the datum corresponding to a percentile rank of 0.698. In other words, determine x such that 69.8% 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 7 times. The sorted data are shown below, along with each datum's index.

i	x
1	26.572
2	27.298
3	27.726
4	29.714
5	30.886
6	31.192
7	32.059

   The total of the measurements is 205.447.

   (a) Determine the percentile rank of the value 27.726. In other words, determine what percent of data are less than or equal to 27.726.

   (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 48 times. The sorted data are shown below.

40.022	40.053	40.070	40.199	40.201	40.233	40.306	40.321
40.333	40.379	40.482	40.533	40.735	40.891	40.998	41.037
41.071	41.090	41.441	41.623	41.878	41.881	41.954	41.968
41.979	41.995	42.004	42.148	42.281	42.422	42.649	42.879
43.263	43.487	43.548	43.558	44.156	44.357	44.706	44.803
44.826	44.880	45.332	45.399	45.547	46.263	47.118	47.767

The total of the measurements is 2037.066.

(a) Determine the percentile rank of the value 44.156. In other words, determine what percent of data are less than or equal to 44.156.

(b) Determine the datum corresponding to a percentile rank of 0.375. In other words, determine x such that 37.5% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

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	101.048
2	103.645
3	117.202
4	129.719
5	135.197
6	143.044
7	150.697
8	162.738
9	167.856

   The total of the measurements is 1211.146.

   (a) Determine the percentile rank of the value 150.697. In other words, determine what percent of data are less than or equal to 150.697.

   (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 72 times. The sorted data are shown below.

80.239	80.933	82.252	83.159	87.818	95.257	97.171	97.850	99.502
101.737	102.731	105.129	105.346	105.634	106.979	108.847	109.585	109.871
114.086	116.272	116.718	117.063	117.650	118.961	120.393	121.780	121.961
122.434	122.521	123.650	123.976	124.597	126.783	127.449	127.509	128.164
128.330	129.699	130.181	131.505	131.805	131.913	132.336	133.020	133.571
134.494	134.578	135.426	135.884	137.458	138.390	138.573	138.781	140.116
141.013	141.424	141.560	142.178	142.305	143.214	143.228	144.350	144.895
145.479	146.133	146.408	147.068	147.352	147.839	148.004	148.757	148.952

The total of the measurements is 8978.226.

(a) Determine the percentile rank of the value 80.239. In other words, determine what percent of data are less than or equal to 80.239.

(b) Determine the datum corresponding to a percentile rank of 0.444. In other words, determine x such that 44.4% 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	81.182
2	81.746
3	86.975
4	88.376
5	88.744
6	90.028
7	91.934
8	103.533
9	129.838
10	140.287

   The total of the measurements is 982.643.

   (a) Determine the percentile rank of the value 86.975. In other words, determine what percent of data are less than or equal to 86.975.

   (b) Determine the datum corresponding to a percentile rank of 0.4. In other words, determine x such that 40% 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.

13.209	13.903	14.030	14.172	14.370	14.517	14.564
14.591	14.687	14.801	14.849	14.954	14.977	14.999
15.176	15.200	15.205	15.231	15.286	15.337	15.570
15.797	15.897	16.308	16.341	16.350	16.402	16.758

The total of the measurements is 423.481.

(a) Determine the percentile rank of the value 13.209. In other words, determine what percent of data are less than or equal to 13.209.

(b) Determine the datum corresponding to a percentile rank of 0.321. In other words, determine x such that 32.1% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

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	40.011
2	40.686
3	40.858
4	41.802
5	41.832
6	42.064
7	42.136
8	42.830

   The total of the measurements is 332.219.

   (a) Determine the percentile rank of the value 42.136. In other words, determine what percent of data are less than or equal to 42.136.

   (b) Determine the datum corresponding to a percentile rank of 0.125. In other words, determine x such that 12.5% 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.

43.129	43.231	43.275	43.688	43.763	43.798	43.889	43.981	44.028
44.030	44.081	44.085	44.113	44.124	44.199	44.211	44.267	44.273
44.274	44.277	44.324	44.326	44.353	44.357	44.386	44.411	44.433
44.437	44.486	44.505	44.556	44.558	44.591	44.616	44.636	44.642
44.642	44.650	44.660	44.696	44.723	44.723	44.734	44.751	44.787
44.788	44.799	44.840	44.841	44.856	44.867	44.878	44.918	44.999
45.016	45.090	45.174	45.205	45.216	45.223	45.225	45.263	45.300
45.346	45.376	45.378	45.398	45.420	45.451	45.481	45.515	45.767
45.861	46.041	46.099	46.122	46.126	46.151	46.211	46.309	46.357

The total of the measurements is 3627.606.

(a) Determine the percentile rank of the value 44.723. In other words, determine what percent of data are less than or equal to 44.723.

(b) Determine the datum corresponding to a percentile rank of 0.111. In other words, determine x such that 11.1% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.

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	10.022
2	10.043
3	10.133
4	10.430
5	10.570
6	10.644
7	11.152
8	11.224
9	11.621
10	12.786

   The total of the measurements is 108.625.

   (a) Determine the percentile rank of the value 11.621. In other words, determine what percent of data are less than or equal to 11.621.

   (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 56 times. The sorted data are shown below.

97.414	99.365	100.413	102.245	103.707	107.543	108.121	109.405
109.803	112.875	112.878	113.740	113.840	114.003	114.035	114.902
114.910	114.962	115.168	116.073	116.117	116.221	116.925	117.653
117.961	118.105	118.433	118.691	119.320	120.839	121.195	121.391
122.082	122.190	122.714	122.731	123.074	123.116	125.076	125.383
126.173	127.066	127.122	127.126	127.265	127.281	127.554	127.570
128.004	128.079	128.481	128.487	129.022	129.129	129.315	129.479

The total of the measurements is 6651.772.

(a) Determine the percentile rank of the value 127.57. In other words, determine what percent of data are less than or equal to 127.57.

(b) Determine the datum corresponding to a percentile rank of 0.357. In other words, determine x such that 35.7% 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 9 times. The sorted data are shown below, along with each datum's index.

i	x
1	92.132
2	92.756
3	93.215
4	94.021
5	94.243
6	94.347
7	94.467
8	94.687
9	94.786

   The total of the measurements is 844.654.

   (a) Determine the percentile rank of the value 94.467. In other words, determine what percent of data are less than or equal to 94.467.

   (b) Determine the datum corresponding to a percentile rank of 0.667. In other words, determine x such that 66.7% 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 48 times. The sorted data are shown below.

20.184	21.416	22.037	22.103	22.563	22.688	23.190	23.210
23.993	24.110	26.258	26.707	28.167	28.553	28.722	30.611
34.369	37.644	38.319	39.848	40.774	41.645	41.880	42.852
42.903	44.573	46.475	46.732	47.007	47.443	51.250	51.480
51.914	52.400	52.526	53.773	54.424	54.535	55.987	56.269
56.738	57.799	58.154	58.484	59.063	59.076	59.441	59.543

The total of the measurements is 1989.832.

(a) Determine the percentile rank of the value 37.644. In other words, determine what percent of data are less than or equal to 37.644.

(b) Determine the datum corresponding to a percentile rank of 0.583. In other words, determine x such that 58.3% 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 7 times. The sorted data are shown below, along with each datum's index.

i	x
1	126.631
2	132.168
3	137.158
4	154.937
5	155.586
6	156.145
7	167.146

   The total of the measurements is 1029.771.

   (a) Determine the percentile rank of the value 126.631. In other words, determine what percent of data are less than or equal to 126.631.

   (b) Determine the datum corresponding to a percentile rank of 0.857. In other words, determine x such that 85.7% 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 36 times. The sorted data are shown below.

92.966	93.780	93.899	93.986	94.003	94.066	94.101	94.321	94.429
94.502	94.534	94.553	94.561	94.568	94.623	94.669	94.738	94.747
94.831	94.847	94.880	94.893	94.970	95.235	95.296	95.426	95.589
95.615	95.639	95.691	95.728	95.827	95.900	95.963	96.223	96.351

The total of the measurements is 3415.95.

(a) Determine the percentile rank of the value 94.553. In other words, determine what percent of data are less than or equal to 94.553.

(b) Determine the datum corresponding to a percentile rank of 0.194. In other words, determine x such that 19.4% of the data are less than or equal to x.

(c) Determine the mean of the measurements.

(d) Determine the median of the measurements.