

## Looking at Confidence Intervals

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This page extends the illustration of taking samples from a population seen in the page [lookatsamples.htm](#). As such we will start with a population. The goal characteristics of that population are:

- Kind=Normal
- Intended mean = 500
- Intended st. dev.= 100

0 to 9	484.31	476.98	310.05	435.08	488.16	557.92	478.27	453.02	684.52	454.10
10 to 19	545.20	442.64	456.26	362.64	557.14	605.79	556.10	521.12	591.32	504.08
20 to 29	414.52	577.10	609.65	606.58	423.35	565.60	488.03	412.87	523.57	629.47
30 to 39	530.64	506.42	439.60	489.43	611.24	641.31	398.74	444.46	418.94	520.57
40 to 49	554.84	650.63	421.35	324.17	432.70	536.76	603.03	521.96	638.19	447.08
50 to 59	540.69	507.19	408.15	556.03	582.87	618.50	445.59	616.53	495.25	582.25
60 to 69	665.54	464.31	449.18	491.70	516.45	426.70	482.37	529.31	406.07	319.70
70 to 79	444.62	438.53	515.47	517.22	506.13	526.00	562.75	447.32	447.56	477.71
80 to 89	438.98	709.12	364.32	557.15	554.95	448.79	539.72	540.00	582.66	524.11
90 to 99	487.09	488.90	540.03	457.05	335.08	348.66	580.02	787.79	530.32	452.47
100 to 109	413.17	532.98	321.77	461.41	376.60	510.00	446.57	686.03	433.15	526.61
110 to 119	649.04	602.46	507.28	346.24	549.48	369.96	454.43	402.82	456.10	626.97
120 to 129	438.03	484.52	649.08	565.67	475.48	489.68	452.85	479.04	546.56	622.71
130 to 139	580.81	495.92	567.70	720.17	468.01	614.21	464.07	642.61	657.01	561.01
140 to 149	494.67	493.44	558.77	486.34	436.50	355.07	492.57	477.30	570.14	471.53
150 to 159	494.52	596.05	595.37	561.17	540.41	590.05	580.46	504.98	556.79	513.07
160 to 169	615.73	552.04	452.58	321.69	255.49	500.53	403.62	460.08	458.02	408.85
170 to 179	693.14	413.69	513.68	437.12	488.90	496.49	645.41	360.73	357.27	445.76
180 to 189	448.96	459.38	462.12	476.33	295.84	607.29	410.13	458.37	588.85	506.51
190 to 199	432.94	393.39	496.33	521.63	576.83	484.88	345.82	638.01	532.30	571.42
200 to 209	631.67	563.33	335.98	470.81	501.23	585.18	705.87	460.76	442.52	552.37
210 to 219	455.15	502.79	347.00	463.95	352.65	454.42	689.86	420.73	422.88	495.51
220 to 229	556.59	481.22	595.92	684.76	490.22	344.54	526.11	498.12	481.60	718.61
230 to 239	437.85	671.69	380.26	643.99	520.96	381.16	480.77	451.69	578.85	674.29
240 to 249	426.26	599.25	471.44	530.12	377.88	488.71	423.88	410.01	501.43	440.85
250 to 259	581.54	448.41	474.61	321.96	508.18	328.77	563.27	475.31	330.57	534.84
260 to 269	627.82	621.34	510.04	409.63	466.35	443.10	473.23	376.93	488.12	540.59
270 to 279	515.24	505.87	394.48	424.97	548.95	450.92	435.39	443.11	500.80	535.15
280 to 289	518.66	354.82	649.72	569.97	423.68	446.96	747.84	437.56	422.78	384.05
290 to 299	400.55	500.24	529.61	440.91	628.46	675.50	464.84	471.83	417.46	422.05
300 to 309	339.28	564.96	567.06	488.32	583.27	439.77	358.98	539.50	657.96	452.20
310 to 319	595.01	560.12	574.27	491.29	461.54	535.15	574.36	638.39	453.74	500.15
320 to 329	601.36	492.02	442.57	495.76	409.03	487.60	472.17	426.69	388.84	644.03
330 to 339	571.41	444.45	636.83	453.53	431.01	615.26	505.62	611.42	340.13	492.21

340 to 349	577.06	547.01	440.14	759.85	397.24	659.02	386.09	447.44	722.51	584.38
350 to 359	422.37	317.93	521.40	390.92	465.92	586.89	500.55	590.57	526.23	481.45
360 to 369	457.44	353.69	526.47	336.10	524.75	505.47	532.34	650.75	344.97	542.64
370 to 379	382.08	588.80	510.77	741.91	266.17	560.37	541.90	534.00	630.69	451.79
380 to 389	366.71	498.39	398.04	469.27	508.08	313.89	627.79	415.98	431.66	717.16
390 to 399	455.79	576.87	476.28	410.46	409.04	417.48	475.58	693.67	476.38	516.41
400 to 409	490.77	400.20	677.23	376.21	402.47	570.11	334.78	474.32	452.34	356.28
410 to 419	544.01	579.71	411.54	422.39	698.78	451.33	395.68	516.17	536.42	441.08
420 to 429	384.19	430.97	344.86	452.72	456.98	562.17	415.99	508.57	432.34	432.39
430 to 439	442.19	291.44	454.46	450.37	559.37	371.90	440.20	477.26	397.47	629.98
440 to 449	630.28	465.37	706.58	594.48	457.79	381.73	513.03	615.64	456.76	423.40
450 to 459	644.78	464.83	397.54	517.74	541.51	548.33	617.11	578.72	504.97	548.19
460 to 469	582.67	435.48	408.35	444.87	572.86	516.95	439.28	283.11	592.13	505.27
470 to 479	237.51	616.36	622.01	293.81	453.17	610.47	660.61	617.38	532.04	619.66
480 to 489	550.42	567.26	469.78	408.74	368.66	275.53	728.72	531.50	683.37	639.19
490 to 499	471.81	439.18	352.42	471.05	307.71	519.37	769.33	290.99	333.65	400.47
500 to 509	451.72	524.54	598.97	567.18	412.09	457.57	505.23	551.25	490.74	424.61
510 to 519	472.28	588.09	741.71	494.95	527.89	545.46	826.29	611.67	466.40	382.46
520 to 529	588.45	480.23	415.10	512.93	496.01	600.28	414.61	447.46	398.98	492.10
530 to 539	484.49	668.94	476.48	388.86	476.96	618.87	423.28	588.17	493.31	536.65
540 to 549	515.26	630.52	546.55	570.95	527.44	472.61	476.98	492.26	608.24	326.40
550 to 559	584.99	548.69	470.98	557.34	426.45	368.03	464.06	480.61	570.61	396.65
560 to 569	416.49	390.94	507.46	378.09	594.36	554.78	601.66	368.61	510.08	571.51
570 to 579	273.28	495.67	694.25	574.52	612.27	543.54	539.43	478.73	509.89	604.62
580 to 589	500.33	758.31	553.05	551.31	520.71	419.04	513.12	651.00	648.70	449.64
590 to 599	649.00	537.15	434.01	364.16	553.24	484.82	513.43	378.28	573.65	500.24
600 to 609	578.10	702.64	390.89	476.15	458.22	431.06	481.20	561.31	608.96	513.90
610 to 619	425.42	505.28	603.95	519.55	490.29	223.87	591.36	642.44	675.38	501.33
620 to 629	757.62	363.80	554.85	267.70	501.95	423.39	533.27	439.00	496.15	514.89
630 to 639	180.12	616.39	429.20	524.51	610.67	412.55	643.71	667.64	538.81	450.18
640 to 649	463.58	523.35	479.95	555.16	490.92	450.89	470.76	409.14	510.37	433.08
650 to 659	519.46	648.42	743.19	450.00	534.65	460.76	489.55	524.90	584.32	428.72
660 to 669	430.22	519.59	633.63	322.43	458.34	376.33	380.50	590.43	473.78	496.36
670 to 679	350.68	425.87	578.76	629.24	458.35	459.85	519.72	602.26	445.40	636.40
680 to 689	543.39	489.64	418.85	392.04	415.34	531.42	479.55	210.81	626.85	647.04
690 to 699	526.49	606.12	448.06	240.42	700.93	465.19	569.60	541.99	380.10	562.56
700 to 709	500.07	506.29	520.65	474.61	552.01	588.69	525.66	585.75	828.93	542.39
710 to 719	551.79	437.68	542.65	448.94	352.96	467.04	448.04	569.43	467.31	550.61
720 to 729	498.20	480.54	250.37	545.36	694.45	360.46	574.19	268.36	563.35	553.23
730 to 739	662.82	697.38	512.39	573.08	600.36	198.17	651.31	490.60	375.43	643.86
740 to 749	408.21	442.77	417.26	509.05	566.33	589.29	449.10	256.05	598.60	586.19
750 to 759	530.00	657.51	358.44	435.03	336.39	481.42	629.78	384.76	554.72	506.82
760 to 769	368.47	505.82	423.43	475.67	312.95	478.29	405.53	439.86	498.97	523.34

770 to 779	545.89	309.22	659.72	535.70	320.29	465.40	568.89	514.23	440.52	344.52
780 to 789	481.87	587.24	499.20	640.63	590.94	709.94	583.80	690.73	346.21	653.45
790 to 799	433.63	487.10	429.52	362.75	630.46	503.59	645.44	451.43	480.39	419.80
800 to 809	620.07	278.02	406.99	537.07	597.91	417.43	803.42	698.57	478.46	546.21
810 to 819	363.18	585.08	421.91	406.63	470.48	302.14	623.69	520.28	475.17	562.05
820 to 829	412.87	406.05	575.77	602.42	390.50	496.24	542.16	499.63	407.79	395.64
830 to 839	549.30	599.63	584.27	451.70	483.06	388.48	488.39	364.39	737.59	364.34
840 to 849	506.56	565.23	710.65	562.09	600.33	558.60	416.36	608.28	400.34	341.91
850 to 859	415.25	532.11	404.75	413.94	371.22	629.29	720.75	603.73	338.92	456.01
860 to 869	600.77	352.30	445.80	514.60	476.90	524.80	517.23	359.60	531.75	558.99
870 to 879	419.14	479.38	451.28	473.33	575.91	365.92	514.35	456.79	418.52	592.41
880 to 889	380.16	517.90	569.51	614.49	528.65	270.51	403.17	579.25	392.25	559.62
890 to 899	581.30	638.63	379.37	423.57	499.71	399.52	511.83	464.31	555.40	446.04
900 to 909	553.88	547.56	485.85	592.03	548.94	426.93	438.60	515.44	525.23	582.19
910 to 919	667.81	374.58	609.02	639.19	631.96	477.13	384.38	559.02	589.76	543.96
920 to 929	595.97	492.65	506.69	348.34	459.47	462.71	298.38	491.89	489.49	569.03
930 to 939	404.20	529.98	470.47	711.51	600.76	563.06	467.59	449.68	539.15	487.08
940 to 949	387.23	392.60	535.18	542.05	409.67	396.23	521.90	526.19	513.22	529.90
950 to 959	493.77	540.40	483.54	321.36	506.88	321.03	407.97	616.03	390.00	567.43
960 to 969	416.28	385.56	482.73	457.65	519.32	409.06	381.22	488.21	545.76	509.86
970 to 979	569.06	572.89	486.43	258.30	662.14	600.91	394.71	430.59	538.81	357.60
980 to 989	617.20	423.44	638.81	588.25	651.33	605.77	424.73	482.37	423.59	393.82
990 to 999	657.70	481.98	581.96	489.13	661.16	503.79	408.65	530.32	482.88	543.39

After generating the population we find that

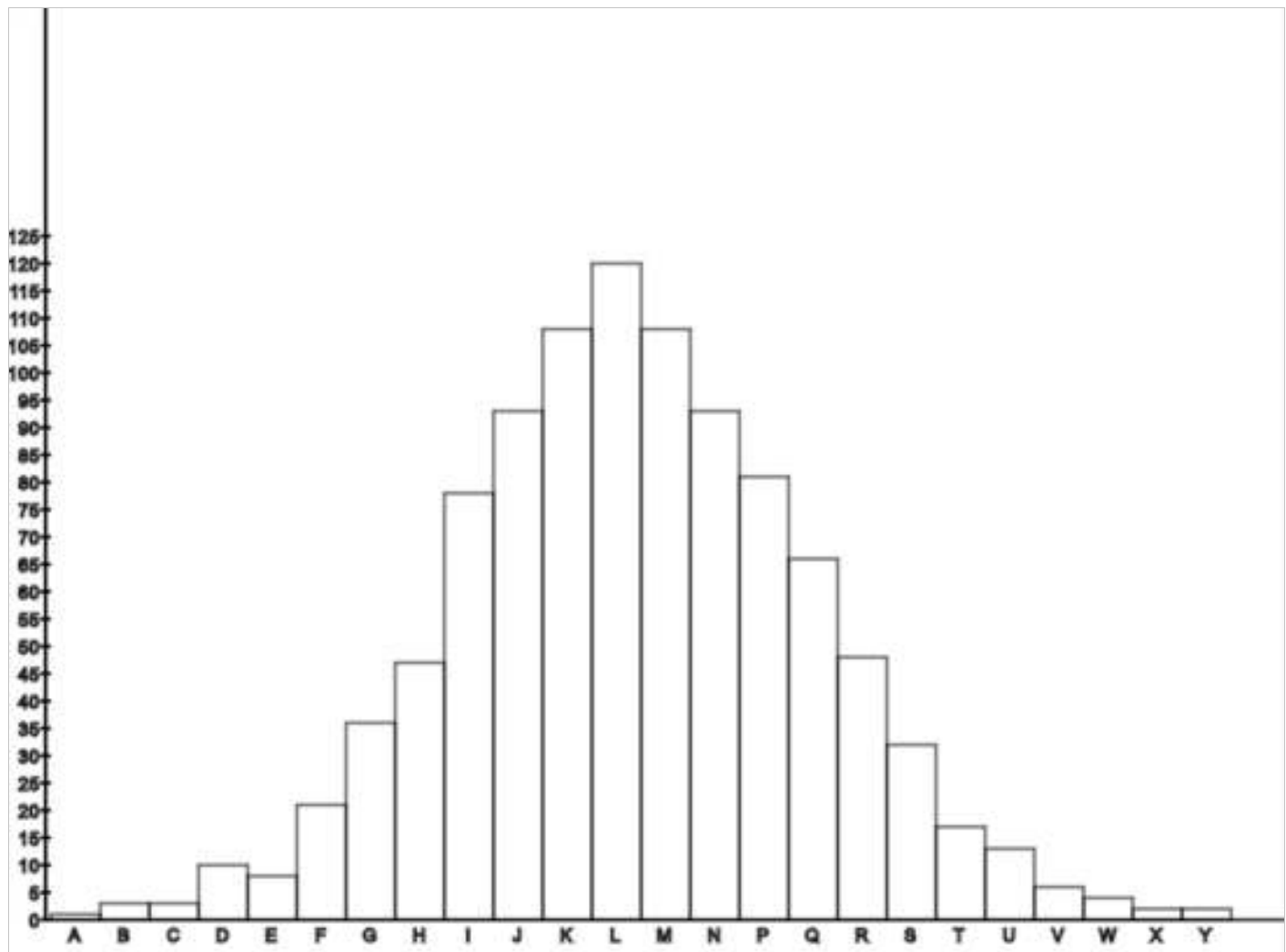
- Achieved mean = 500.00000000
- Achieved st. dev.= 100.00000000

Now we will sort the values and display them again:

0 to 9	180.12	198.17	210.81	223.87	237.51	240.42	250.37	255.49	256.05	258.30
10 to 19	266.17	267.70	268.36	270.51	273.28	275.53	278.02	283.11	290.99	291.44
20 to 29	293.81	295.84	298.38	302.14	307.71	309.22	310.05	312.95	313.89	317.93
30 to 39	319.70	320.29	321.03	321.36	321.69	321.77	321.96	322.43	324.17	326.40
40 to 49	328.77	330.57	333.65	334.78	335.08	335.98	336.10	336.39	338.92	339.28
50 to 59	340.13	341.91	344.52	344.54	344.86	344.97	345.82	346.21	346.24	347.00
60 to 69	348.34	348.66	350.68	352.30	352.42	352.65	352.96	353.69	354.82	355.07
70 to 79	356.28	357.27	357.60	358.44	358.98	359.60	360.46	360.73	362.64	362.75
80 to 89	363.18	363.80	364.16	364.32	364.34	364.39	365.92	366.71	368.03	368.47
90 to 99	368.61	368.66	369.96	371.22	371.90	374.58	375.43	376.21	376.33	376.60
100 to 109	376.93	377.88	378.09	378.28	379.37	380.10	380.16	380.26	380.50	381.16
110 to 119	381.22	381.73	382.08	382.46	384.05	384.19	384.38	384.76	385.56	386.09
120 to 129	387.23	388.48	388.84	388.86	390.00	390.50	390.89	390.92	390.94	392.04
130 to 139	392.25	392.60	393.39	393.82	394.48	394.71	395.64	395.68	396.23	396.65

140 to 149	397.24	397.47	397.54	398.04	398.74	398.98	399.52	400.20	400.34	400.47
150 to 159	400.55	402.47	402.82	403.17	403.62	404.20	404.75	405.53	406.05	406.07
160 to 169	406.63	406.99	407.79	407.97	408.15	408.21	408.35	408.65	408.74	408.85
170 to 179	409.03	409.04	409.06	409.14	409.63	409.67	410.01	410.13	410.46	411.54
180 to 189	412.09	412.55	412.87	412.87	413.17	413.69	413.94	414.52	414.61	415.10
190 to 199	415.25	415.34	415.98	415.99	416.28	416.36	416.49	417.26	417.43	417.46
200 to 209	417.48	418.52	418.85	418.94	419.04	419.14	419.80	420.73	421.35	421.91
210 to 219	422.05	422.37	422.39	422.78	422.88	423.28	423.35	423.39	423.40	423.43
220 to 229	423.44	423.57	423.59	423.68	423.88	424.61	424.73	424.97	425.42	425.87
230 to 239	426.26	426.45	426.69	426.70	426.93	428.72	429.20	429.52	430.22	430.59
240 to 249	430.97	431.01	431.06	431.66	432.34	432.39	432.70	432.94	433.08	433.15
250 to 259	433.63	434.01	435.03	435.08	435.39	435.48	436.50	437.12	437.56	437.68
260 to 269	437.85	438.03	438.53	438.60	438.98	439.00	439.18	439.28	439.60	439.77
270 to 279	439.86	440.14	440.20	440.52	440.85	440.91	441.08	442.19	442.52	442.57
280 to 289	442.64	442.77	443.10	443.11	444.45	444.46	444.62	444.87	445.40	445.59
290 to 299	445.76	445.80	446.04	446.57	446.96	447.08	447.32	447.44	447.46	447.56
300 to 309	448.04	448.06	448.41	448.79	448.94	448.96	449.10	449.18	449.64	449.68
310 to 319	450.00	450.18	450.37	450.89	450.92	451.28	451.33	451.43	451.69	451.70
320 to 329	451.72	451.79	452.20	452.34	452.47	452.58	452.72	452.85	453.02	453.17
330 to 339	453.53	453.74	454.10	454.42	454.43	454.46	455.15	455.79	456.01	456.10
340 to 349	456.26	456.76	456.79	456.98	457.05	457.44	457.57	457.65	457.79	458.02
350 to 359	458.22	458.34	458.35	458.37	459.38	459.47	459.85	460.08	460.76	460.76
360 to 369	461.41	461.54	462.12	462.71	463.58	463.95	464.06	464.07	464.31	464.31
370 to 379	464.83	464.84	465.19	465.37	465.40	465.92	466.35	466.40	467.04	467.31
380 to 389	467.59	468.01	469.27	469.78	470.47	470.48	470.76	470.81	470.98	471.05
390 to 399	471.44	471.53	471.81	471.83	472.17	472.28	472.61	473.23	473.33	473.78
400 to 409	474.32	474.61	474.61	475.17	475.31	475.48	475.58	475.67	476.15	476.28
410 to 419	476.33	476.38	476.48	476.90	476.96	476.98	476.98	477.13	477.26	477.30
420 to 429	477.71	478.27	478.29	478.46	478.73	479.04	479.38	479.55	479.95	480.23
430 to 439	480.39	480.54	480.61	480.77	481.20	481.22	481.42	481.45	481.60	481.87
440 to 449	481.98	482.37	482.37	482.73	482.88	483.06	483.54	484.31	484.49	484.52
450 to 459	484.82	484.88	485.85	486.34	486.43	487.08	487.09	487.10	487.60	488.03
460 to 469	488.12	488.16	488.21	488.32	488.39	488.71	488.90	488.90	489.13	489.43
470 to 479	489.49	489.55	489.64	489.68	490.22	490.29	490.60	490.74	490.77	490.92
480 to 489	491.29	491.70	491.89	492.02	492.10	492.21	492.26	492.57	492.65	493.31
490 to 499	493.44	493.77	494.52	494.67	494.95	495.25	495.51	495.67	495.76	495.92
500 to 509	496.01	496.15	496.24	496.33	496.36	496.49	498.12	498.20	498.39	498.97
510 to 519	499.20	499.63	499.71	500.07	500.15	500.24	500.24	500.33	500.53	500.55
520 to 529	500.80	501.23	501.33	501.43	501.95	502.79	503.59	503.79	504.08	504.97
530 to 539	504.98	505.23	505.27	505.28	505.47	505.62	505.82	505.87	506.13	506.29
540 to 549	506.42	506.51	506.56	506.69	506.82	506.88	507.19	507.28	507.46	508.08
550 to 559	508.18	508.57	509.05	509.86	509.89	510.00	510.04	510.08	510.37	510.77
560 to 569	511.83	512.39	512.93	513.03	513.07	513.12	513.22	513.43	513.68	513.90

570 to 579	514.23	514.35	514.60	514.89	515.24	515.26	515.44	515.47	516.17	516.41
580 to 589	516.45	516.95	517.22	517.23	517.74	517.90	518.66	519.32	519.37	519.46
590 to 599	519.55	519.59	519.72	520.28	520.57	520.65	520.71	520.96	521.12	521.40
600 to 609	521.63	521.90	521.96	523.34	523.35	523.57	524.11	524.51	524.54	524.75
610 to 619	524.80	524.90	525.23	525.66	526.00	526.11	526.19	526.23	526.47	526.49
620 to 629	526.61	527.44	527.89	528.65	529.31	529.61	529.90	529.98	530.00	530.12
630 to 639	530.32	530.32	530.64	531.42	531.50	531.75	532.04	532.11	532.30	532.34
640 to 649	532.98	533.27	534.00	534.65	534.84	535.15	535.15	535.18	535.70	536.42
650 to 659	536.65	536.76	537.07	537.15	538.81	538.81	539.15	539.43	539.50	539.72
660 to 669	540.00	540.03	540.40	540.41	540.59	540.69	541.51	541.90	541.99	542.05
670 to 679	542.16	542.39	542.64	542.65	543.39	543.39	543.54	543.96	544.01	545.20
680 to 689	545.36	545.46	545.76	545.89	546.21	546.55	546.56	547.01	547.56	548.19
690 to 699	548.33	548.69	548.94	548.95	549.30	549.48	550.42	550.61	551.25	551.31
700 to 709	551.79	552.01	552.04	552.37	553.05	553.23	553.24	553.88	554.72	554.78
710 to 719	554.84	554.85	554.95	555.16	555.40	556.03	556.10	556.59	556.79	557.14
720 to 729	557.15	557.34	557.92	558.60	558.77	558.99	559.02	559.37	559.62	560.12
730 to 739	560.37	561.01	561.17	561.31	562.05	562.09	562.17	562.56	562.75	563.06
740 to 749	563.27	563.33	563.35	564.96	565.23	565.60	565.67	566.33	567.06	567.18
750 to 759	567.26	567.43	567.70	568.89	569.03	569.06	569.43	569.51	569.60	569.97
760 to 769	570.11	570.14	570.61	570.95	571.41	571.42	571.51	572.86	572.89	573.08
770 to 779	573.65	574.19	574.27	574.36	574.52	575.77	575.91	576.83	576.87	577.06
780 to 789	577.10	578.10	578.72	578.76	578.85	579.25	579.71	580.02	580.46	580.81
790 to 799	581.30	581.54	581.96	582.19	582.25	582.66	582.67	582.87	583.27	583.80
800 to 809	584.27	584.32	584.38	584.99	585.08	585.18	585.75	586.19	586.89	587.24
810 to 819	588.09	588.17	588.25	588.45	588.69	588.80	588.85	589.29	589.76	590.05
820 to 829	590.43	590.57	590.94	591.32	591.36	592.03	592.13	592.41	594.36	594.48
830 to 839	595.01	595.37	595.92	595.97	596.05	597.91	598.60	598.97	599.25	599.63
840 to 849	600.28	600.33	600.36	600.76	600.77	600.91	601.36	601.66	602.26	602.42
850 to 859	602.46	603.03	603.73	603.95	604.62	605.77	605.79	606.12	606.58	607.29
860 to 869	608.24	608.28	608.96	609.02	609.65	610.47	610.67	611.24	611.42	611.67
870 to 879	612.27	614.21	614.49	615.26	615.64	615.73	616.03	616.36	616.39	616.53
880 to 889	617.11	617.20	617.38	618.50	618.87	619.66	620.07	621.34	622.01	622.71
890 to 899	623.69	626.85	626.97	627.79	627.82	628.46	629.24	629.29	629.47	629.78
900 to 909	629.98	630.28	630.46	630.52	630.69	631.67	631.96	633.63	636.40	636.83
910 to 919	638.01	638.19	638.39	638.63	638.81	639.19	639.19	640.63	641.31	642.44
920 to 929	642.61	643.71	643.86	643.99	644.03	644.78	645.41	645.44	647.04	648.42
930 to 939	648.70	649.00	649.04	649.08	649.72	650.63	650.75	651.00	651.31	651.33
940 to 949	653.45	657.01	657.51	657.70	657.96	659.02	659.72	660.61	661.16	662.14
950 to 959	662.82	665.54	667.64	667.81	668.94	671.69	674.29	675.38	675.50	677.23
960 to 969	683.37	684.52	684.76	686.03	689.86	690.73	693.14	693.67	694.25	694.45
970 to 979	697.38	698.57	698.78	700.93	702.64	705.87	706.58	709.12	709.94	710.65
980 to 989	711.51	717.16	718.61	720.17	720.75	722.51	728.72	737.59	741.71	741.91
990 to 999	743.19	747.84	757.62	758.31	759.85	769.33	787.79	803.42	826.29	828.93



Name	Interval	Freq	Name	Interval	Freq	Name	Interval	Freq	Name	Interval	Freq
A	[168.00,196.00)	1	G	[336.00,364.00)	36	M	[504.00,532.00)	108	T	[672.00,700.00)	17
B	[196.00,224.00)	3	H	[364.00,392.00)	47	N	[532.00,560.00)	93	U	[700.00,728.00)	13
C	[224.00,252.00)	3	I	[392.00,420.00)	78	P	[560.00,588.00)	81	V	[728.00,756.00)	6
D	[252.00,280.00)	10	J	[420.00,448.00)	93	Q	[588.00,616.00)	66	W	[756.00,784.00)	4
E	[280.00,308.00)	8	K	[448.00,476.00)	108	R	[616.00,644.00)	48	X	[784.00,812.00)	2
F	[308.00,336.00)	21	L	[476.00,504.00)	120	S	[644.00,672.00)	32	Y	[812.00,840.00)	2
G	[336.00,364.00)	36	M	[504.00,532.00)	108	T	[672.00,700.00)	17			

For starters, we will produce a histogram of the data distribution

[175.000,181.600) : X

[181.600,188.200) :

[188.200,194.800) :

[194.800,201.400) : X

[201.400,208.000) :

[208.000,214.600) : X

[214.600,221.200) :  
[221.200,227.800) : X  
[227.800,234.400) :  
[234.400,241.000) : XX  
[241.000,247.600) :  
[247.600,254.200) : X  
[254.200,260.800) : XXX  
[260.800,267.400) : X  
[267.400,274.000) : XXXX  
[274.000,280.600) : XX  
[280.600,287.200) : X  
[287.200,293.800) : XX  
[293.800,300.400) : XXX  
[300.400,307.000) : X  
[307.000,313.600) : XXXX  
[313.600,320.200) : XXX  
[320.200,326.800) : XXXXXXXXXXXX  
[326.800,333.400) : XX  
[333.400,340.000) : XXXXXXXXXXXX  
[340.000,346.600) : XXXXXXXXXXXX  
[346.600,353.200) : XXXXXXXXXXXX  
[353.200,359.800) : XXXXXXXXXXXX  
[359.800,366.400) : XXXXXXXXXXXXXXXX  
[366.400,373.000) : XXXXXXXXXXXX  
[373.000,379.600) : XXXXXXXXXXXXXXXX  
[379.600,386.200) : XXXXXXXXXXXXXXXXXXXX  
[386.200,392.800) : XXXXXXXXXXXXXXXX  
[392.800,399.400) : XXXXXXXXXXXXXXXXXXXX  
[399.400,406.000) : XXXXXXXXXXXXXXXX  
[406.000,412.600) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[412.600,419.200) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
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[425.800,432.400) : XXXXXXXXXXXXXXXXXXXXXXXX  
[432.400,439.000) : XXXXXXXXXXXXXXXXXXXXXXXX  
[439.000,445.600) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[445.600,452.200) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[452.200,458.800) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[458.800,465.400) : XXXXXXXXXXXXXXXXXXXXXXXX  
[465.400,472.000) : XXXXXXXXXXXXXXXXXXXXXXXX  
[472.000,478.600) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[478.600,485.200) : XXXXXXXXXXXXXXXXXXXXXXXX  
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[491.800,498.400) : XXXXXXXXXXXXXXXXXXXXXXXX  
[498.400,505.000) : XXXXXXXXXXXXXXXXXXXXXXXX  
[505.000,511.600) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[511.600,518.200) : XXXXXXXXXXXXXXXXXXXXXXXX

[518.200,524.800) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[524.800,531.400) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[531.400,538.000) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[538.000,544.600) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[544.600,551.200) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[551.200,557.800) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[557.800,564.400) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[564.400,571.000) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[571.000,577.600) : XXXXXXXXXXXXXXXXXXXXXXXX  
[577.600,584.200) : XXXXXXXXXXXXXXXXXXXXXXXX  
[584.200,590.800) : XXXXXXXXXXXXXXXXXXXXXXXX  
[590.800,597.400) : XXXXXXXXXXXXXXXX  
[597.400,604.000) : XXXXXXXXXXXXXXXXXXXXXXXX  
[604.000,610.600) : XXXXXXXXXXXXXXXX  
[610.600,617.200) : XXXXXXXXXXXXXXXXXXXXXXXX  
[617.200,623.800) : XXXXXXXXXXXXXXXX  
[623.800,630.400) : XXXXXXXXXXXXXXXX  
[630.400,637.000) : XXXXXXXXX  
[637.000,643.600) : XXXXXXXXXXXXXXXX  
[643.600,650.200) : XXXXXXXXXXXXXXXXXXXXXXXX  
[650.200,656.800) : XXXXXXXX  
[656.800,663.400) : XXXXXXXXXXXXXXXX  
[663.400,670.000) : XXXX  
[670.000,676.600) : XXXX  
[676.600,683.200) : X  
[683.200,689.800) : XXXX  
[689.800,696.400) : XXXXXX  
[696.400,703.000) : XXXXXX  
[703.000,709.600) : XXX  
[709.600,716.200) : XXX  
[716.200,722.800) : XXXXXX  
[722.800,729.400) : X  
[729.400,736.000) :  
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[742.600,749.200) : XX  
[749.200,755.800) :  
[755.800,762.400) : XXX  
[762.400,769.000) :  
[769.000,775.600) : X  
[775.600,782.200) :  
[782.200,788.800) : X  
[788.800,795.400) :  
[795.400,802.000) :  
[802.000,808.600) : X  
[808.600,815.200) :  
[815.200,821.800) :



[821.800,828.400) : X

[828.400,835.000) : X

Now we will embark on drawing 1000 samples of size 40 and from each such sample we will get a sample mean and a sample standard deviation, both of which we will record. Here is a display of the 1000 sample means (top value) and standard deviations (bottom value):

sample number	mean std. dev.	mean std. dev.	mean std. dev.	mean std. dev.	mean std. dev.	mean std. dev.	mean std. dev.	mean std. dev.	mean std. dev.	mean std. dev.
0 to 9	484.12 81.24	507.50 92.05	511.52 93.33	488.47 125.07	484.86 100.52	518.29 94.75	502.46 87.67	517.92 103.70	493.31 88.10	474.01 75.74
10 to 19	499.97 107.91	514.75 114.42	505.37 109.71	477.75 94.20	511.11 81.70	502.86 105.67	525.81 113.49	499.36 98.56	507.99 93.28	498.45 89.77
20 to 29	478.11 99.71	503.67 113.28	486.84 107.97	477.01 103.63	509.89 91.94	524.22 110.89	484.42 82.75	474.03 99.74	514.46 119.36	501.06 84.10
30 to 39	499.60 109.23	490.71 104.42	496.45 96.52	492.52 90.02	492.56 86.26	494.47 119.57	485.91 114.45	524.17 104.51	510.70 81.12	498.51 86.70
40 to 49	473.88 108.56	486.95 99.51	520.42 88.14	516.55 111.33	500.53 74.27	492.89 88.59	501.00 112.86	487.91 106.17	513.04 94.74	491.22 77.94
50 to 59	495.01 94.12	516.94 113.10	513.20 99.12	496.99 101.53	493.24 120.71	490.96 91.77	479.23 106.11	485.83 103.29	518.33 83.57	518.46 94.73
60 to 69	485.03 95.70	492.55 106.24	494.67 118.01	517.12 109.80	486.41 95.64	473.21 80.14	507.00 112.70	506.15 115.89	487.25 133.53	472.30 92.05
70 to 79	481.34 94.03	517.07 85.82	487.15 82.59	490.21 102.43	494.20 90.01	527.51 82.03	500.34 108.87	518.40 98.46	484.24 89.05	503.52 97.65
80 to 89	518.08 99.79	507.91 91.17	505.12 85.20	524.01 97.83	488.79 109.56	475.16 87.12	503.44 90.37	493.77 81.25	516.29 112.87	484.29 114.82
90 to 99	495.56 85.93	497.13 103.22	495.14 98.61	502.70 117.93	514.76 101.36	471.86 97.12	484.78 79.70	517.75 104.20	494.99 94.09	515.21 93.64
100 to 109	507.18 101.01	456.76 99.68	496.02 99.69	472.04 110.07	524.27 100.85	468.34 98.54	545.52 81.35	502.40 83.24	505.21 76.40	491.92 109.98
110 to 119	555.14 103.74	503.61 98.34	490.64 105.23	488.93 108.37	504.57 103.74	490.47 107.71	510.06 97.31	504.78 98.44	495.00 80.28	500.21 90.01
120 to 129	513.83 104.75	511.44 105.90	489.33 88.13	509.09 95.60	515.95 97.11	506.64 86.37	473.61 105.67	474.11 101.19	486.54 107.94	496.99 102.34
130 to 139	507.79 95.21	507.66 96.83	512.53 83.55	506.53 93.85	488.25 83.54	512.06 89.62	487.83 118.19	513.52 106.64	495.40 86.76	520.62 106.09
140 to 149	509.09 104.18	529.43 94.61	492.98 83.33	481.67 82.15	483.33 109.39	514.13 114.33	517.34 107.22	512.48 103.13	488.29 111.32	511.06 113.01
150 to 159	492.61 95.83	475.85 96.47	509.37 102.71	518.09 97.69	499.53 87.30	490.20 90.86	481.15 89.17	510.48 107.72	486.57 98.32	524.21 94.70
160 to 169	487.45 104.26	503.05 96.49	530.04 100.99	484.58 103.60	474.46 93.08	466.47 96.11	515.75 106.28	490.44 108.67	503.95 120.63	525.02 99.15
170 to 179	496.38 95.12	532.83 106.28	507.00 99.94	526.77 115.29	490.79 108.93	508.04 122.66	509.84 110.32	510.25 96.91	504.45 102.87	513.79 112.02
180 to 189	505.82 103.55	509.69 108.08	505.99 85.82	512.24 91.84	502.40 90.16	499.43 108.75	526.46 105.68	519.15 82.27	479.67 90.57	487.06 94.49
190 to 199	491.08 96.86	498.69 78.88	506.30 106.86	503.41 99.57	516.74 103.10	483.55 77.11	489.02 84.10	503.88 99.52	505.02 105.07	520.60 80.75

200 to 209	485.11 98.70	462.27 81.70	498.88 94.33	508.79 115.34	477.10 112.92	462.78 92.07	518.04 91.30	484.43 113.10	495.31 88.59	541.33 87.34
210 to 219	480.68 100.39	488.40 91.67	523.91 90.04	487.12 82.14	529.50 127.96	503.77 92.86	513.66 102.77	522.58 95.98	510.45 95.28	501.32 102.15
220 to 229	497.58 111.29	509.79 88.39	499.20 84.98	477.88 109.41	502.24 99.30	477.33 122.19	517.02 88.80	504.76 92.06	496.82 94.41	501.40 106.97
230 to 239	502.68 87.85	523.91 91.12	485.76 99.53	524.16 80.51	492.61 121.78	514.65 112.48	505.01 109.40	519.57 106.59	533.92 105.14	465.50 110.36
240 to 249	505.24 108.78	510.51 92.23	491.99 118.73	496.91 94.00	534.07 94.16	494.95 86.83	506.82 83.74	519.71 98.52	508.96 113.04	498.64 108.14
250 to 259	521.70 93.86	501.79 92.85	474.51 76.83	516.44 110.89	519.30 110.46	506.29 111.74	523.63 89.67	503.15 77.26	510.10 88.80	477.90 91.14
260 to 269	511.08 116.80	492.13 69.16	480.65 82.92	504.86 103.64	518.44 95.00	483.65 102.22	502.06 83.98	485.97 93.91	454.38 112.35	509.32 94.41
270 to 279	511.91 105.88	498.12 91.63	500.68 107.57	475.20 117.84	484.32 77.34	511.34 94.75	501.21 103.41	489.65 117.73	499.97 85.78	472.81 88.07
280 to 289	492.83 123.54	484.26 95.22	487.05 93.20	505.68 91.03	501.75 90.38	490.58 80.73	488.62 90.52	502.74 100.99	471.92 108.34	477.43 93.86
290 to 299	527.20 110.17	495.81 111.56	495.11 96.21	451.68 98.00	510.30 109.69	510.51 96.02	509.30 78.47	497.63 113.99	512.14 86.28	534.92 108.71
300 to 309	480.57 74.19	510.34 119.78	479.52 85.48	493.85 95.75	500.44 120.46	491.34 95.83	501.41 86.93	534.66 117.56	476.87 93.10	523.49 120.53
310 to 319	489.21 93.68	506.79 89.83	520.95 104.38	499.01 80.58	476.12 108.16	503.37 100.01	518.48 97.10	521.75 110.19	513.16 93.99	516.24 113.08
320 to 329	480.28 91.59	488.09 93.70	469.48 88.79	523.88 91.36	498.94 115.19	525.40 93.17	509.96 75.47	496.56 87.89	522.46 88.38	516.30 104.59
330 to 339	441.62 99.23	514.84 97.08	510.20 103.14	493.23 111.96	512.65 97.58	496.40 99.42	497.21 102.98	473.35 85.42	484.53 96.57	498.21 98.80
340 to 349	490.80 117.41	480.31 122.81	495.19 97.59	481.61 90.56	523.88 105.61	507.53 96.68	511.60 88.22	487.79 96.73	489.93 89.04	493.89 101.98
350 to 359	497.98 85.97	511.96 107.07	505.00 104.64	487.48 116.96	525.02 115.64	488.65 101.14	497.39 92.77	509.27 83.82	484.58 109.24	489.03 113.99
360 to 369	505.70 114.75	506.03 104.37	524.15 118.31	500.04 99.96	484.75 92.99	524.36 120.24	504.57 82.53	525.22 104.35	491.22 101.41	519.55 115.78
370 to 379	491.81 110.15	503.37 106.88	516.74 113.06	506.77 109.76	505.40 82.57	528.84 121.06	476.76 93.12	498.80 126.49	506.56 87.31	497.44 105.85
380 to 389	517.73 101.85	508.70 94.76	516.53 112.70	489.31 101.06	494.83 78.46	508.56 90.95	510.21 87.99	478.00 109.09	496.00 88.76	526.65 105.48
390 to 399	511.64 92.83	504.78 96.51	493.53 103.32	484.83 104.95	515.03 73.85	490.17 131.39	488.62 98.80	509.77 102.71	490.98 110.21	512.05 98.77
400 to 409	512.74 98.87	507.56 86.52	524.64 94.48	515.11 100.48	522.69 110.66	497.75 79.43	501.95 116.68	477.17 106.91	509.00 83.99	506.07 95.13
410 to 419	493.98 108.73	494.95 89.44	493.95 77.79	491.99 89.31	497.99 87.90	504.88 94.26	491.86 110.81	492.57 84.56	519.66 87.45	506.99 123.14
420 to 429	475.82 109.14	511.90 93.24	512.36 109.53	499.79 94.65	507.95 87.58	491.70 91.23	513.29 101.99	478.71 84.40	494.26 87.41	505.99 81.77
430 to 439	522.36 94.29	492.13 108.58	506.99 93.73	488.04 131.12	489.06 126.35	497.99 115.94	482.93 97.86	496.46 87.77	529.84 76.29	479.12 99.59

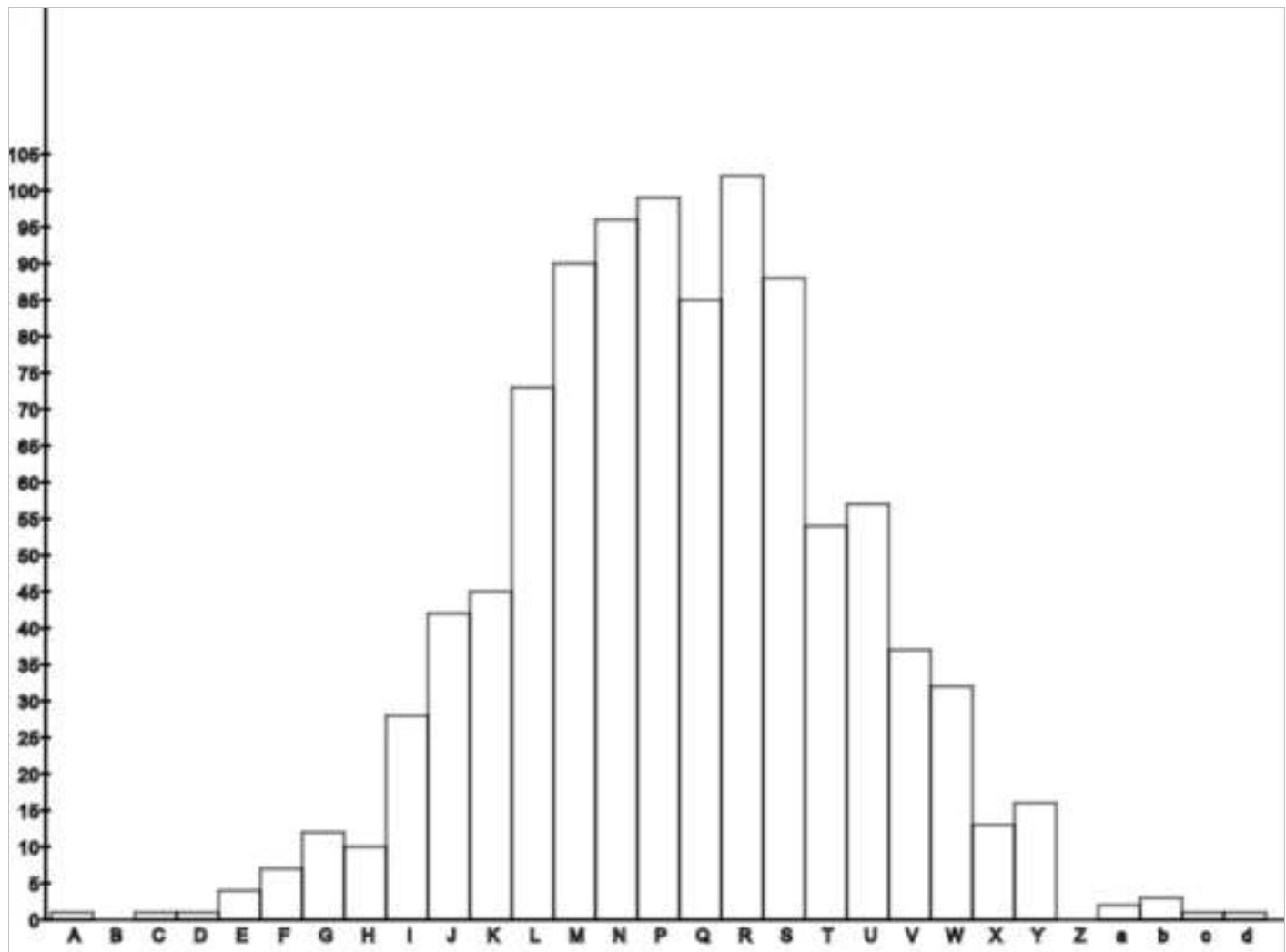
440 to 449	515.62 117.83	476.43 90.38	496.85 109.94	507.80 115.34	509.62 107.11	493.50 99.49	503.66 98.86	486.67 81.26	507.06 101.47	501.70 90.94
450 to 459	507.66 88.41	494.42 102.19	463.55 106.76	507.70 94.91	483.13 104.27	489.66 103.36	490.26 98.57	518.87 102.65	499.19 101.40	507.32 65.70
460 to 469	495.55 81.69	498.53 112.64	481.00 103.27	474.47 109.12	505.48 101.66	500.74 91.37	491.11 102.31	496.79 113.09	488.60 112.15	497.58 118.93
470 to 479	470.72 99.26	508.50 96.99	521.75 88.13	492.57 118.65	487.87 94.95	497.39 87.88	484.38 89.33	498.32 123.35	487.03 91.14	482.82 107.59
480 to 489	514.98 95.90	472.79 93.03	512.07 111.86	486.93 97.44	504.34 87.18	499.70 105.51	480.79 89.51	496.58 115.33	502.63 113.50	509.61 95.62
490 to 499	535.32 112.40	529.59 125.71	480.83 110.45	510.99 90.29	480.03 90.22	476.75 89.91	478.00 63.36	502.10 95.23	508.80 83.07	478.68 113.03
500 to 509	498.62 84.12	499.55 76.85	467.32 108.06	486.06 110.10	490.91 110.92	500.17 74.37	494.89 98.37	488.62 108.35	496.95 104.71	521.47 105.35
510 to 519	502.15 112.55	507.57 108.50	535.19 112.55	493.46 87.68	487.46 80.38	456.66 92.76	509.80 118.63	532.62 103.81	503.51 86.10	497.77 95.49
520 to 529	502.90 92.51	503.82 83.17	488.61 77.40	504.33 108.71	531.81 92.87	503.78 82.87	484.07 104.78	491.81 104.61	501.93 93.32	515.13 85.52
530 to 539	521.38 93.37	483.91 84.85	545.55 129.38	509.62 92.30	489.14 84.01	518.91 96.68	486.90 74.07	487.85 79.64	501.84 95.14	497.62 84.71
540 to 549	520.33 103.14	510.10 100.25	498.03 98.27	531.83 78.61	497.81 100.81	495.48 97.60	525.03 98.47	534.13 100.35	483.86 109.56	508.30 97.92
550 to 559	519.82 102.10	487.32 92.23	484.24 104.27	508.95 87.30	501.81 102.62	496.91 105.43	495.47 124.88	488.42 79.39	524.52 110.80	496.39 114.00
560 to 569	501.76 92.76	500.43 110.72	507.64 102.29	482.93 76.34	514.49 95.80	495.54 104.68	494.59 90.01	506.11 98.86	510.66 108.54	511.59 87.86
570 to 579	522.19 88.31	549.08 99.22	506.07 90.97	476.47 103.37	506.27 119.38	483.72 88.99	508.20 102.96	496.69 95.55	491.95 100.06	503.79 117.14
580 to 589	506.59 103.52	525.20 91.11	509.44 87.73	501.39 110.28	514.48 92.19	491.96 107.13	463.28 94.74	487.00 84.41	497.04 101.74	506.68 97.23
590 to 599	486.29 77.20	499.42 107.77	511.39 88.90	477.86 96.66	532.36 101.69	488.67 103.11	501.23 100.06	515.40 98.31	509.00 98.08	474.27 100.54
600 to 609	503.37 110.26	491.83 112.66	516.70 101.46	498.35 85.64	465.50 91.34	492.98 94.60	508.44 98.49	497.31 109.96	484.11 101.16	523.18 114.02
610 to 619	509.02 107.72	494.02 100.01	480.49 86.43	502.51 95.28	473.97 90.83	495.99 86.66	464.17 110.36	498.62 110.44	491.46 85.85	515.49 87.76
620 to 629	488.05 76.08	532.19 91.57	477.42 94.02	507.14 119.01	489.32 91.53	527.51 98.68	491.07 96.42	518.44 112.67	480.62 72.23	532.71 85.75
630 to 639	481.05 118.75	486.69 74.03	507.87 110.08	477.66 97.82	491.69 109.75	496.90 98.96	519.81 102.85	482.69 101.29	506.06 95.92	478.42 98.39
640 to 649	486.46 106.85	507.32 88.40	497.86 108.46	509.78 112.01	512.21 96.02	516.28 124.43	511.53 90.40	517.38 93.72	483.95 79.88	508.72 118.69
650 to 659	504.94 89.32	494.28 92.48	495.73 90.74	472.58 92.10	501.02 117.45	492.00 106.78	490.08 88.13	478.83 87.06	525.65 109.67	482.92 107.64
660 to 669	487.97 102.77	499.49 106.82	490.06 93.51	502.99 104.08	475.15 107.70	505.30 102.85	483.48 95.23	484.68 100.90	493.87 120.47	514.01 98.38
670 to 679	528.64 95.25	469.76 88.96	505.85 103.18	498.87 90.92	499.09 91.45	500.77 81.73	493.40 82.64	499.51 96.55	477.20 87.45	508.66 98.41

680 to 689	506.61 83.25	518.19 88.41	518.39 104.60	521.86 95.15	505.58 88.45	516.20 106.47	491.64 123.33	490.21 93.18	489.75 69.14	508.72 93.38
690 to 699	512.03 106.81	494.26 105.31	510.82 109.39	508.11 98.00	489.15 110.00	492.80 114.63	501.20 108.83	499.57 101.86	485.97 88.16	523.36 117.83
700 to 709	498.16 95.00	459.62 99.81	474.25 118.20	504.82 93.77	500.11 83.41	494.27 103.31	527.17 109.40	499.74 106.19	522.02 130.35	517.84 93.40
710 to 719	507.43 87.21	513.50 92.15	479.36 89.41	507.06 108.70	503.91 88.69	481.68 98.41	508.92 121.96	485.58 88.44	503.37 103.58	505.34 91.86
720 to 729	518.03 85.14	494.25 70.05	507.64 89.30	505.12 114.63	505.84 104.67	501.72 86.37	498.26 100.07	493.87 79.12	496.46 123.78	497.38 74.99
730 to 739	483.84 98.27	478.00 120.32	478.50 93.50	511.81 81.38	501.14 69.73	505.75 90.17	496.89 110.06	532.20 85.52	492.71 101.19	490.88 80.62
740 to 749	530.07 103.25	485.05 95.02	506.04 91.01	529.75 90.83	507.50 81.65	495.37 101.80	505.76 77.44	473.06 81.91	499.85 98.81	480.38 93.37
750 to 759	540.28 118.81	521.88 89.76	524.30 104.84	524.52 84.92	522.38 106.02	494.77 105.14	500.17 100.66	484.51 100.33	467.89 106.70	533.44 101.55
760 to 769	515.55 94.59	490.58 108.10	492.32 112.98	496.82 95.04	493.72 68.66	510.70 99.15	513.11 90.05	497.43 90.51	515.88 110.42	487.63 75.84
770 to 779	489.20 111.22	502.93 112.40	493.95 110.61	494.00 99.57	522.75 103.42	507.44 110.19	496.26 83.33	508.31 116.99	499.03 112.34	480.50 104.57
780 to 789	496.11 139.56	510.80 99.34	486.83 73.12	489.70 93.67	507.05 108.65	515.83 99.86	507.42 103.36	506.11 82.75	503.26 99.34	500.74 111.20
790 to 799	486.24 107.11	495.63 128.06	511.71 103.52	478.77 94.57	503.50 120.15	473.70 98.64	519.85 90.09	490.45 94.93	505.39 104.64	507.81 102.26
800 to 809	480.76 83.35	483.93 104.57	498.59 109.15	492.66 122.69	488.30 105.04	522.54 85.26	487.75 80.92	513.74 123.59	514.83 102.99	496.51 79.50
810 to 819	492.62 110.82	489.48 102.37	499.62 102.51	509.74 103.14	520.05 109.44	521.92 91.67	521.05 95.44	494.55 117.61	520.30 90.32	501.05 119.68
820 to 829	499.16 102.73	524.09 86.59	517.90 82.48	524.21 90.95	471.17 107.08	487.04 86.35	494.64 118.27	490.75 117.28	465.46 93.27	492.44 104.04
830 to 839	506.17 112.56	493.28 126.57	495.53 90.25	497.36 88.90	481.95 90.44	511.97 92.88	507.79 118.31	462.52 109.60	499.78 100.31	487.58 88.68
840 to 849	494.70 105.49	511.98 102.64	505.92 82.54	479.09 90.43	502.80 106.00	458.99 75.85	481.18 89.82	469.28 98.19	483.33 98.25	492.15 89.08
850 to 859	487.02 107.40	488.39 87.38	520.88 110.78	477.22 114.50	507.84 101.53	525.39 96.56	477.06 120.45	490.01 106.89	483.30 87.94	479.06 83.38
860 to 869	499.29 94.88	494.95 94.27	505.50 99.42	506.83 96.52	465.13 86.86	484.90 103.42	501.93 106.48	528.87 83.43	505.26 112.84	493.07 99.78
870 to 879	505.88 104.70	479.06 96.58	470.46 116.21	517.45 101.84	492.01 105.75	505.20 127.46	470.01 121.71	488.62 104.45	466.35 105.73	497.11 92.83
880 to 889	509.57 99.98	531.98 107.25	485.45 94.59	501.39 89.93	492.94 83.32	501.64 119.23	523.93 97.05	523.36 104.38	498.15 115.94	512.02 109.51
890 to 899	485.32 95.39	503.12 106.38	517.32 99.92	495.63 96.17	478.84 110.28	513.83 94.08	493.43 117.99	500.13 99.92	502.35 110.43	534.57 101.72
900 to 909	485.14 103.58	526.78 109.19	510.74 92.29	517.28 97.98	515.83 81.49	511.39 93.92	516.77 99.00	483.24 120.09	517.47 110.22	507.67 113.96
910 to 919	479.44 104.81	496.59 116.63	493.06 97.68	487.49 107.39	475.80 100.55	484.33 99.74	503.96 93.19	489.18 87.63	490.58 106.49	475.98 79.81

920 to 929	493.31 66.58	519.98 102.84	507.99 87.35	495.59 81.83	502.47 89.31	509.91 119.47	518.91 89.81	511.88 118.91	526.09 84.10	516.94 119.95
930 to 939	490.91 104.14	519.17 94.84	499.48 100.07	498.21 132.10	496.53 125.96	490.51 92.50	508.82 108.25	503.80 97.36	493.41 117.63	497.69 100.45
940 to 949	510.50 92.82	483.79 98.45	502.37 104.96	490.11 113.67	508.53 91.75	503.98 115.29	499.48 90.87	477.13 115.52	509.96 114.81	463.98 91.74
950 to 959	487.88 91.70	488.50 71.54	517.93 71.58	498.50 88.70	462.68 97.26	508.20 104.94	465.79 82.94	464.93 100.08	483.11 112.60	467.47 106.40
960 to 969	546.44 92.16	492.52 119.41	512.10 118.02	519.48 109.24	493.22 91.37	502.21 104.76	494.31 110.61	492.10 78.42	492.77 84.68	495.89 85.87
970 to 979	472.33 82.37	490.21 107.96	489.67 92.12	490.61 77.75	488.53 88.77	507.88 103.25	495.97 95.49	523.41 98.90	507.77 95.03	499.43 102.31
980 to 989	515.88 102.17	512.21 112.65	495.61 104.44	506.61 92.26	509.08 107.26	483.22 94.77	489.56 85.93	511.85 84.92	478.31 103.49	512.09 108.01
990 to 999	486.60 90.37	481.47 92.80	510.79 98.31	495.14 97.63	498.74 62.47	491.38 97.44	506.39 104.21	515.00 93.25	535.02 115.41	506.85 94.26

Having taken those samples we can recall or compute the

- Achieved mean of data = 500.00000000
- Mean of the mean values = 499.95556967
- Standard deviation of the mean values = 15.96754978
- Predicted standard deviation of means = 15.81138830
  
- Achieved standard deviation of data = 100.00000000
- Mean of the standard deviation values = 99.03453744
- Standard deviation of the standard deviation values = 12.15146809



Name	Interval	Freq	Name	Interval	Freq	Name	Interval	Freq	Name	Interval	Freq
A	[440.00,444.00)	1	H	[468.00,472.00)	10	P	[496.00,500.00)	99	W	[524.00,528.00)	32
B	[444.00,448.00)	0	I	[472.00,476.00)	28	Q	[500.00,504.00)	85	X	[528.00,532.00)	13
C	[448.00,452.00)	1	J	[476.00,480.00)	42	R	[504.00,508.00)	102	Y	[532.00,536.00)	16
D	[452.00,456.00)	1	K	[480.00,484.00)	45	S	[508.00,512.00)	88	Z	[536.00,540.00)	0
E	[456.00,460.00)	4	L	[484.00,488.00)	73	T	[512.00,516.00)	54	a	[540.00,544.00)	2
F	[460.00,464.00)	7	M	[488.00,492.00)	90	U	[516.00,520.00)	57	b	[544.00,548.00)	3
G	[464.00,468.00)	12	N	[492.00,496.00)	96	V	[520.00,524.00)	37	c	[548.00,552.00)	1
H	[468.00,472.00)	10	P	[496.00,500.00)	99	W	[524.00,528.00)	32	d	[552.00,556.00)	1

The lowest sample mean was 441.61590029

The highest sample mean was 555.14126382

A histogram of the sample means:

[440.000,441.560) :

[441.560,443.120) : X

[443.120,444.680) :

[444.680,446.240) :

[446.240,447.800) :  
[447.800,449.360) :  
[449.360,450.920) :  
[450.920,452.480) : X  
[452.480,454.040) :  
[454.040,455.600) : X  
[455.600,457.160) : XX  
[457.160,458.720) :  
[458.720,460.280) : XX  
[460.280,461.840) :  
[461.840,463.400) : XXXXX  
[463.400,464.960) : XXXX  
[464.960,466.520) : XXXXXXXX  
[466.520,468.080) : XXXX  
[468.080,469.640) : XXX  
[469.640,471.200) : XXXXX  
[471.200,472.760) : XXXXXX  
[472.760,474.320) : XXXXXXXXXXXXXXXX  
[474.320,475.880) : XXXXXXXXXXXX  
[475.880,477.440) : XXXXXXXXXXXXXXXXXXXX  
[477.440,479.000) : XXXXXXXXXXXXXXXXXXXX  
[479.000,480.560) : XXXXXXXXXXXXXXXXXXXX  
[480.560,482.120) : XXXXXXXXXXXXXXXXXXXX  
[482.120,483.680) : XXXXXXXXXXXXXXXXXXXX  
[483.680,485.240) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[485.240,486.800) : XXXXXXXXXXXXXXXXXXXX  
[486.800,488.360) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[488.360,489.920) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[489.920,491.480) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[491.480,493.040) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[493.040,494.600) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[494.600,496.160) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[496.160,497.720) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[497.720,499.280) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[499.280,500.840) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[500.840,502.400) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[502.400,503.960) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[503.960,505.520) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[505.520,507.080) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[507.080,508.640) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[508.640,510.200) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[510.200,511.760) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[511.760,513.320) : XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  
[513.320,514.880) : XXXXXXXXXXXXXXXXXXXX  
[514.880,516.440) : XXXXXXXXXXXXXXXXXXXX  
[516.440,518.000) : XXXXXXXXXXXXXXXXXXXX

[518.000,519.560) : XXXXXXXXXXXXXXXXXXXXXXXX  
 [519.560,521.120) : XXXXXXXXXXXXXXXXXXXX  
 [521.120,522.680) : XXXXXXXXXXXXXXXXXXXX  
 [522.680,524.240) : XXXXXXXXXXXXXXXXXXXXXXXX  
 [524.240,525.800) : XXXXXXXXXXXXXXXX  
 [525.800,527.360) : XXXXXXXXX  
 [527.360,528.920) : XXXXX  
 [528.920,530.480) : XXXXXXXX  
 [530.480,532.040) : XXX  
 [532.040,533.600) : XXXXXXXX  
 [533.600,535.160) : XXXXXXXX  
 [535.160,536.720) : XX  
 [536.720,538.280) :  
 [538.280,539.840) :  
 [539.840,541.400) : XX  
 [541.400,542.960) :  
 [542.960,544.520) :  
 [544.520,546.080) : XX  
 [546.080,547.640) : X  
 [547.640,549.200) : X  
 [549.200,550.760) :  
 [550.760,552.320) :  
 [552.320,553.880) :  
 [553.880,555.440) : X  
 [555.440,557.000) :

Now we will use those 1000 pairs of values, the mean and standard deviation of each of the 1000 samples, to generate 1000 confidence intervals. Actually, we will generate two confidence intervals for each sample: a confidence interval if we know the standard deviation of the underlying population (which we know is 99.9999999999837) and a confidence interval if we do not know that value.

We will be creating 90.00% confidence intervals. Note that the **z**-value for 0.95000 is 1.6449, and the **t**-value for 39 degrees of freedom is 1.6849. Also, for the known population standard deviation case, the **standard error of the mean** will always be that value, namely, 99.9999999999837 divided by the square root of the sample size, in this case that is the square root of 40, or 15.8114, which means that when we know the population standard deviation then the margin of error will always be 26.0075. For confidence intervals where we do not know the population standard deviation we use the sample standard deviation divided by the square root of the sample size. Thus, in those cases, the margin of error needs to be recomputed for every sample. This is shown in the table below.

		Known Population Standard Deviation			Unknown population Standard deviation				
Sample Number	Sample mean	MOE	Confidence Interval	mean in ?	Sample St. Dev.	St. Err of mean	MOE	Confidence Interval	Mean in ?
0	484.119	26.008	(458.112,510.127)		81.244	12.846	21.643	(462.476,505.763)	
1	507.500	26.008	(481.492,533.507)		92.051	14.555	24.522	(482.977,532.022)	
2	511.515	26.008	(485.507,537.523)		93.329	14.757	24.863	(486.652,536.378)	



3	488.472	26.008	(462.464,514.479)		125.065	19.775	33.318	(455.154,521.789)	
4	484.862	26.008	(458.855,510.870)		100.525	15.894	26.780	(458.082,511.642)	
5	518.294	26.008	(492.286,544.301)		94.746	14.981	25.240	(493.053,543.534)	
6	502.456	26.008	(476.449,528.464)		87.667	13.861	23.355	(479.101,525.811)	
7	517.919	26.008	(491.912,543.927)		103.696	16.396	27.625	(490.294,545.544)	
8	493.312	26.008	(467.305,519.320)		88.101	13.930	23.470	(469.842,516.782)	
9	474.015	26.008	(448.007,500.022)		75.737	11.975	20.176	(453.838,494.191)	FAIL
10	499.966	26.008	(473.959,525.974)		107.908	17.062	28.747	(471.219,528.713)	
11	514.751	26.008	(488.744,540.759)		114.419	18.091	30.481	(484.270,545.233)	
12	505.375	26.008	(479.367,531.383)		109.709	17.346	29.227	(476.148,534.602)	
13	477.748	26.008	(451.740,503.755)		94.203	14.895	25.096	(452.652,502.843)	
14	511.108	26.008	(485.100,537.115)		81.696	12.917	21.764	(489.344,532.872)	
15	502.864	26.008	(476.856,528.871)		105.667	16.707	28.150	(474.714,531.014)	
16	525.807	26.008	(499.800,551.815)		113.491	17.945	30.234	(495.573,556.041)	
17	499.364	26.008	(473.356,525.371)		98.561	15.584	26.257	(473.107,525.621)	
18	507.994	26.008	(481.986,534.001)		93.283	14.749	24.851	(483.143,532.844)	
19	498.445	26.008	(472.438,524.453)		89.770	14.194	23.915	(474.531,522.360)	
20	478.108	26.008	(452.101,504.116)		99.711	15.766	26.563	(451.545,504.671)	
21	503.667	26.008	(477.660,529.675)		113.284	17.912	30.179	(473.488,533.846)	
22	486.843	26.008	(460.836,512.851)		107.966	17.071	28.762	(458.081,515.606)	
23	477.013	26.008	(451.005,503.020)		103.627	16.385	27.606	(449.407,504.619)	
24	509.888	26.008	(483.881,535.896)		91.942	14.537	24.494	(485.395,534.382)	
25	524.221	26.008	(498.213,550.228)		110.885	17.532	29.540	(494.681,553.761)	
26	484.417	26.008	(458.409,510.425)		82.746	13.083	22.044	(462.373,506.461)	
27	474.029	26.008	(448.022,500.037)		99.737	15.770	26.570	(447.459,500.599)	
28	514.461	26.008	(488.454,540.469)		119.357	18.872	31.797	(482.664,546.258)	
29	501.058	26.008	(475.050,527.065)		84.095	13.297	22.403	(478.655,523.461)	
30	499.596	26.008	(473.589,525.604)		109.227	17.270	29.098	(470.498,528.695)	
31	490.712	26.008	(464.704,516.719)		104.424	16.511	27.819	(462.893,518.530)	
32	496.452	26.008	(470.445,522.460)		96.521	15.261	25.713	(470.739,522.165)	
33	492.521	26.008	(466.514,518.529)		90.023	14.234	23.982	(468.539,516.504)	
34	492.563	26.008	(466.556,518.571)		86.258	13.639	22.979	(469.584,515.543)	
35	494.473	26.008	(468.466,520.481)		119.565	18.905	31.852	(462.621,526.326)	
36	485.907	26.008	(459.899,511.914)		114.449	18.096	30.489	(455.417,516.396)	
37	524.168	26.008	(498.161,550.176)		104.508	16.524	27.841	(496.327,552.009)	
38	510.701	26.008	(484.693,536.708)		81.122	12.827	21.611	(489.090,532.312)	
39	498.511	26.008	(472.503,524.519)		86.704	13.709	23.098	(475.413,521.609)	
40	473.882	26.008	(447.874,499.889)	FAIL	108.562	17.165	28.921	(444.961,502.802)	
41	486.953	26.008	(460.945,512.960)		99.513	15.734	26.510	(460.442,513.463)	
42	520.419	26.008	(494.411,546.426)		88.143	13.937	23.481	(496.937,543.900)	
43	516.551	26.008	(490.543,542.558)		111.332	17.603	29.659	(486.892,546.210)	
44	500.526	26.008	(474.519,526.534)		74.267	11.743	19.785	(480.741,520.311)	
45	492.888	26.008	(466.880,518.895)		88.585	14.007	23.599	(469.288,516.487)	

46	501.002	26.008	(474.994,527.009)		112.856	17.844	30.065	(470.937,531.067)	
47	487.905	26.008	(461.898,513.913)		106.173	16.787	28.285	(459.621,516.190)	
48	513.039	26.008	(487.031,539.046)		94.742	14.980	25.239	(487.799,538.278)	
49	491.222	26.008	(465.215,517.230)		77.935	12.323	20.762	(470.460,511.984)	
50	495.014	26.008	(469.007,521.022)		94.118	14.881	25.073	(469.941,520.087)	
51	516.938	26.008	(490.931,542.946)		113.099	17.882	30.130	(486.809,547.068)	
52	513.205	26.008	(487.197,539.212)		99.121	15.672	26.406	(486.799,539.611)	
53	496.992	26.008	(470.984,522.999)		101.534	16.054	27.049	(469.943,524.041)	
54	493.237	26.008	(467.230,519.245)		120.710	19.086	32.157	(461.080,525.395)	
55	490.957	26.008	(464.950,516.965)		91.767	14.510	24.447	(466.510,515.404)	
56	479.230	26.008	(453.223,505.238)		106.111	16.778	28.268	(450.962,507.498)	
57	485.830	26.008	(459.823,511.838)		103.288	16.331	27.516	(458.314,513.346)	
58	518.326	26.008	(492.318,544.333)		83.569	13.213	22.263	(496.063,540.589)	
59	518.458	26.008	(492.451,544.466)		94.728	14.978	25.236	(493.223,543.694)	
60	485.028	26.008	(459.020,511.035)		95.705	15.132	25.496	(459.532,510.524)	
61	492.554	26.008	(466.546,518.561)		106.243	16.798	28.303	(464.251,520.857)	
62	494.671	26.008	(468.663,520.678)		118.012	18.659	31.439	(463.232,526.109)	
63	517.119	26.008	(491.112,543.127)		109.804	17.361	29.252	(487.868,546.371)	
64	486.406	26.008	(460.399,512.414)		95.639	15.122	25.478	(460.928,511.884)	
65	473.205	26.008	(447.198,499.213)	FAIL	80.141	12.671	21.350	(451.856,494.555)	FAIL
66	507.004	26.008	(480.996,533.011)		112.701	17.820	30.024	(476.980,537.028)	
67	506.152	26.008	(480.144,532.159)		115.890	18.324	30.873	(475.279,537.025)	
68	487.250	26.008	(461.243,513.258)		133.530	21.113	35.572	(451.678,522.823)	
69	472.296	26.008	(446.289,498.304)	FAIL	92.047	14.554	24.521	(447.775,496.818)	FAIL
70	481.336	26.008	(455.329,507.344)		94.029	14.867	25.049	(456.287,506.385)	
71	517.075	26.008	(491.067,543.082)		85.821	13.569	22.863	(494.212,539.937)	
72	487.147	26.008	(461.139,513.154)		82.592	13.059	22.003	(465.144,509.149)	
73	490.209	26.008	(464.201,516.216)		102.427	16.195	27.287	(462.922,517.495)	
74	494.204	26.008	(468.196,520.211)		90.012	14.232	23.979	(470.224,518.183)	
75	527.510	26.008	(501.503,553.518)	FAIL	82.030	12.970	21.853	(505.657,549.363)	FAIL
76	500.336	26.008	(474.329,526.344)		108.868	17.214	29.003	(471.334,529.339)	
77	518.402	26.008	(492.394,544.409)		98.456	15.567	26.229	(492.173,544.631)	
78	484.241	26.008	(458.233,510.248)		89.053	14.080	23.724	(460.517,507.964)	
79	503.524	26.008	(477.517,529.532)		97.655	15.441	26.015	(477.509,529.540)	
80	518.077	26.008	(492.069,544.084)		99.792	15.778	26.585	(491.492,544.661)	
81	507.913	26.008	(481.905,533.920)		91.169	14.415	24.287	(483.625,532.200)	
82	505.117	26.008	(479.109,531.124)		85.200	13.471	22.697	(482.419,527.814)	
83	524.007	26.008	(498.000,550.015)		97.827	15.468	26.061	(497.946,550.068)	
84	488.793	26.008	(462.785,514.801)		109.558	17.323	29.186	(459.607,517.979)	
85	475.164	26.008	(449.157,501.172)		87.117	13.774	23.208	(451.956,498.372)	FAIL
86	503.436	26.008	(477.429,529.444)		90.372	14.289	24.075	(479.361,527.512)	
87	493.769	26.008	(467.762,519.777)		81.252	12.847	21.646	(472.123,515.415)	
88	516.288	26.008	(490.280,542.295)		112.872	17.847	30.069	(486.218,546.357)	

89	484.290	26.008	(458.282,510.297)		114.823	18.155	30.589	(453.701,514.879)	
90	495.564	26.008	(469.556,521.571)		85.934	13.587	22.893	(472.671,518.457)	
91	497.130	26.008	(471.123,523.138)		103.220	16.321	27.498	(469.632,524.628)	
92	495.139	26.008	(469.131,521.146)		98.605	15.591	26.269	(468.870,521.407)	
93	502.698	26.008	(476.690,528.705)		117.928	18.646	31.416	(471.281,534.114)	
94	514.755	26.008	(488.748,540.763)		101.355	16.026	27.001	(487.754,541.757)	
95	471.863	26.008	(445.855,497.870)	FAIL	97.119	15.356	25.873	(445.990,497.735)	FAIL
96	484.780	26.008	(458.772,510.787)		79.704	12.602	21.233	(463.546,506.013)	
97	517.755	26.008	(491.747,543.762)		104.200	16.475	27.759	(489.996,545.514)	
98	494.985	26.008	(468.978,520.993)		94.089	14.877	25.066	(469.920,520.051)	
99	515.206	26.008	(489.199,541.214)		93.641	14.806	24.946	(490.260,540.152)	
100	507.183	26.008	(481.176,533.191)		101.011	15.971	26.909	(480.274,534.093)	
101	456.763	26.008	(430.755,482.770)	FAIL	99.680	15.761	26.555	(430.208,483.317)	FAIL
102	496.021	26.008	(470.014,522.029)		99.685	15.762	26.556	(469.465,522.578)	
103	472.044	26.008	(446.037,498.052)	FAIL	110.070	17.404	29.323	(442.722,501.367)	
104	524.265	26.008	(498.258,550.273)		100.848	15.946	26.866	(497.399,551.132)	
105	468.340	26.008	(442.332,494.347)	FAIL	98.543	15.581	26.252	(442.088,494.592)	FAIL
106	545.515	26.008	(519.508,571.523)	FAIL	81.355	12.863	21.673	(523.842,567.188)	FAIL
107	502.399	26.008	(476.391,528.406)		83.242	13.162	22.176	(480.223,524.575)	
108	505.211	26.008	(479.203,531.218)		76.395	12.079	20.352	(484.859,525.563)	
109	491.923	26.008	(465.915,517.930)		109.982	17.390	29.299	(462.623,521.222)	
110	555.141	26.008	(529.134,581.149)	FAIL	103.739	16.403	27.636	(527.505,582.777)	FAIL
111	503.611	26.008	(477.603,529.618)		98.337	15.548	26.197	(477.413,529.808)	
112	490.638	26.008	(464.630,516.645)		105.230	16.638	28.033	(462.604,518.671)	
113	488.934	26.008	(462.926,514.941)		108.369	17.135	28.870	(460.064,517.803)	
114	504.573	26.008	(478.566,530.581)		103.743	16.403	27.637	(476.936,532.210)	
115	490.465	26.008	(464.458,516.473)		107.713	17.031	28.695	(461.771,519.160)	
116	510.064	26.008	(484.057,536.072)		97.309	15.386	25.923	(484.141,535.987)	
117	504.777	26.008	(478.769,530.784)		98.435	15.564	26.223	(478.553,531.000)	
118	495.003	26.008	(468.995,521.010)		80.279	12.693	21.386	(473.617,516.389)	
119	500.205	26.008	(474.198,526.213)		90.006	14.231	23.978	(476.227,524.183)	
120	513.830	26.008	(487.823,539.838)		104.750	16.562	27.905	(485.925,541.736)	
121	511.441	26.008	(485.433,537.448)		105.903	16.745	28.213	(483.228,539.654)	
122	489.325	26.008	(463.318,515.333)		88.132	13.935	23.478	(465.847,512.804)	
123	509.088	26.008	(483.081,535.096)		95.605	15.116	25.469	(483.619,534.558)	
124	515.947	26.008	(489.940,541.955)		97.110	15.354	25.870	(490.077,541.817)	
125	506.642	26.008	(480.634,532.649)		86.375	13.657	23.010	(483.631,529.652)	
126	473.607	26.008	(447.600,499.615)	FAIL	105.672	16.708	28.151	(445.456,501.758)	
127	474.111	26.008	(448.104,500.119)		101.193	16.000	26.958	(447.153,501.069)	
128	486.540	26.008	(460.533,512.548)		107.939	17.067	28.755	(457.785,515.295)	
129	496.991	26.008	(470.984,522.999)		102.336	16.181	27.262	(469.729,524.254)	
130	507.790	26.008	(481.783,533.798)		95.208	15.054	25.363	(482.427,533.154)	
131	507.656	26.008	(481.649,533.664)		96.831	15.310	25.796	(481.860,533.452)	

132	512.526	26.008	(486.519,538.534)		83.550	13.210	22.258	(490.269,534.784)	
133	506.525	26.008	(480.518,532.533)		93.846	14.838	25.001	(481.525,531.526)	
134	488.249	26.008	(462.242,514.257)		83.543	13.209	22.256	(465.993,510.505)	
135	512.063	26.008	(486.055,538.070)		89.624	14.171	23.876	(488.187,535.939)	
136	487.829	26.008	(461.822,513.837)		118.191	18.688	31.486	(456.343,519.315)	
137	513.518	26.008	(487.510,539.525)		106.641	16.861	28.409	(485.108,541.927)	
138	495.403	26.008	(469.396,521.411)		86.756	13.717	23.112	(472.291,518.515)	
139	520.624	26.008	(494.617,546.632)		106.092	16.775	28.263	(492.361,548.887)	
140	509.089	26.008	(483.082,535.097)		104.183	16.473	27.755	(481.335,536.844)	
141	529.432	26.008	(503.424,555.439)	FAIL	94.606	14.959	25.203	(504.228,554.635)	FAIL
142	492.979	26.008	(466.971,518.986)		83.334	13.176	22.200	(470.779,515.179)	
143	481.673	26.008	(455.665,507.680)		82.153	12.989	21.886	(459.787,503.558)	
144	483.332	26.008	(457.324,509.339)		109.391	17.296	29.142	(454.190,512.474)	
145	514.127	26.008	(488.119,540.134)		114.325	18.076	30.456	(483.670,544.583)	
146	517.337	26.008	(491.329,543.344)		107.215	16.952	28.562	(488.774,545.899)	
147	512.480	26.008	(486.473,538.488)		103.130	16.306	27.474	(485.006,539.954)	
148	488.293	26.008	(462.286,514.301)		111.323	17.602	29.656	(458.637,517.950)	
149	511.061	26.008	(485.053,537.068)		113.013	17.869	30.107	(480.954,541.167)	
150	492.614	26.008	(466.607,518.622)		95.834	15.153	25.530	(467.084,518.145)	
151	475.848	26.008	(449.840,501.855)		96.468	15.253	25.699	(450.149,501.547)	
152	509.374	26.008	(483.366,535.381)		102.715	16.241	27.363	(482.010,536.737)	
153	518.087	26.008	(492.080,544.095)		97.691	15.446	26.025	(492.062,544.112)	
154	499.533	26.008	(473.526,525.541)		87.301	13.804	23.257	(476.276,522.791)	
155	490.200	26.008	(464.193,516.208)		90.864	14.367	24.206	(465.994,514.406)	
156	481.148	26.008	(455.140,507.155)		89.174	14.100	23.756	(457.392,504.904)	
157	510.484	26.008	(484.477,536.492)		107.717	17.032	28.696	(481.788,539.180)	
158	486.575	26.008	(460.567,512.582)		98.324	15.546	26.194	(460.381,512.768)	
159	524.210	26.008	(498.203,550.218)		94.695	14.973	25.227	(498.983,549.437)	
160	487.448	26.008	(461.441,513.456)		104.264	16.486	27.776	(459.672,515.224)	
161	503.049	26.008	(477.042,529.057)		96.489	15.256	25.705	(477.344,528.754)	
162	530.040	26.008	(504.032,556.047)	FAIL	100.989	15.968	26.904	(503.136,556.943)	FAIL
163	484.580	26.008	(458.572,510.587)		103.603	16.381	27.600	(456.980,512.180)	
164	474.456	26.008	(448.449,500.464)		93.085	14.718	24.798	(449.658,499.254)	FAIL
165	466.474	26.008	(440.466,492.481)	FAIL	96.112	15.197	25.604	(440.869,492.078)	FAIL
166	515.746	26.008	(489.739,541.754)		106.280	16.804	28.313	(487.433,544.059)	
167	490.444	26.008	(464.436,516.451)		108.669	17.182	28.949	(461.494,519.393)	
168	503.950	26.008	(477.943,529.958)		120.628	19.073	32.135	(471.815,536.086)	
169	525.023	26.008	(499.016,551.031)		99.148	15.677	26.413	(498.610,551.437)	
170	496.379	26.008	(470.371,522.386)		95.124	15.040	25.341	(471.037,521.720)	
171	532.829	26.008	(506.821,558.836)	FAIL	106.280	16.804	28.313	(504.516,561.142)	FAIL
172	506.998	26.008	(480.990,533.005)		99.936	15.801	26.623	(480.375,533.621)	
173	526.774	26.008	(500.766,552.781)	FAIL	115.286	18.228	30.712	(496.061,557.486)	
174	490.786	26.008	(464.779,516.794)		108.928	17.223	29.018	(461.768,519.805)	

175	508.045	26.008	(482.037,534.052)		122.664	19.395	32.678	(475.367,540.722)	
176	509.839	26.008	(483.832,535.847)		110.324	17.444	29.390	(480.449,539.230)	
177	510.252	26.008	(484.245,536.260)		96.908	15.322	25.816	(484.436,536.069)	
178	504.455	26.008	(478.447,530.462)		102.869	16.265	27.404	(477.050,531.859)	
179	513.793	26.008	(487.786,539.801)		112.017	17.711	29.841	(483.952,543.635)	
180	505.816	26.008	(479.808,531.823)		103.548	16.372	27.585	(478.230,533.401)	
181	509.689	26.008	(483.682,535.697)		108.076	17.088	28.792	(480.898,538.481)	
182	505.991	26.008	(479.983,531.998)		85.816	13.569	22.861	(483.129,528.852)	
183	512.239	26.008	(486.231,538.246)		91.838	14.521	24.466	(487.773,536.705)	
184	502.402	26.008	(476.395,528.410)		90.161	14.256	24.019	(478.383,526.421)	
185	499.433	26.008	(473.425,525.440)		108.752	17.195	28.972	(470.461,528.404)	
186	526.461	26.008	(500.454,552.469)	FAIL	105.679	16.709	28.153	(498.308,554.614)	
187	519.148	26.008	(493.141,545.156)		82.268	13.008	21.916	(497.232,541.064)	
188	479.665	26.008	(453.658,505.673)		90.572	14.321	24.129	(455.537,503.794)	
189	487.065	26.008	(461.057,513.072)		94.486	14.940	25.171	(461.894,512.236)	
190	491.078	26.008	(465.071,517.086)		96.858	15.315	25.803	(465.275,516.881)	
191	498.691	26.008	(472.683,524.698)		78.882	12.472	21.014	(477.676,519.705)	
192	506.305	26.008	(480.297,532.312)		106.863	16.896	28.468	(477.837,534.773)	
193	503.408	26.008	(477.400,529.415)		99.571	15.744	26.526	(476.882,529.934)	
194	516.741	26.008	(490.733,542.748)		103.103	16.302	27.467	(489.274,544.208)	
195	483.548	26.008	(457.540,509.555)		77.110	12.192	20.542	(463.006,504.090)	
196	489.022	26.008	(463.015,515.030)		84.096	13.297	22.403	(466.619,511.426)	
197	503.878	26.008	(477.870,529.885)		99.519	15.735	26.512	(477.366,530.390)	
198	505.025	26.008	(479.017,531.032)		105.065	16.612	27.990	(477.035,533.014)	
199	520.602	26.008	(494.594,546.609)		80.751	12.768	21.512	(499.090,542.114)	
200	485.115	26.008	(459.107,511.122)		98.698	15.606	26.293	(458.821,511.408)	
201	462.267	26.008	(436.259,488.274)	FAIL	81.703	12.918	21.766	(440.501,484.033)	FAIL
202	498.877	26.008	(472.869,524.885)		94.331	14.915	25.130	(473.747,524.007)	
203	508.788	26.008	(482.780,534.795)		115.345	18.238	30.728	(478.060,539.516)	
204	477.104	26.008	(451.096,503.111)		112.920	17.854	30.082	(447.022,507.186)	
205	462.777	26.008	(436.769,488.784)	FAIL	92.072	14.558	24.528	(438.248,487.305)	FAIL
206	518.036	26.008	(492.029,544.044)		91.303	14.436	24.323	(493.713,542.360)	
207	484.426	26.008	(458.418,510.433)		113.097	17.882	30.129	(454.297,514.555)	
208	495.313	26.008	(469.306,521.321)		88.586	14.007	23.599	(471.714,518.913)	
209	541.334	26.008	(515.327,567.342)	FAIL	87.344	13.810	23.269	(518.066,564.603)	FAIL
210	480.681	26.008	(454.674,506.689)		100.391	15.873	26.744	(453.937,507.426)	
211	488.399	26.008	(462.392,514.407)		91.672	14.495	24.421	(463.978,512.821)	
212	523.907	26.008	(497.900,549.915)		90.043	14.237	23.988	(499.920,547.895)	
213	487.122	26.008	(461.115,513.130)		82.136	12.987	21.881	(465.241,509.003)	
214	529.498	26.008	(503.491,555.506)	FAIL	127.962	20.232	34.089	(495.409,563.587)	
215	503.773	26.008	(477.765,529.780)		92.860	14.683	24.738	(479.035,528.511)	
216	513.664	26.008	(487.657,539.672)		102.771	16.249	27.378	(486.286,541.042)	
217	522.579	26.008	(496.572,548.587)		95.976	15.175	25.568	(497.011,548.147)	

218	510.449	26.008	(484.441,536.456)		95.283	15.066	25.384	(485.065,535.832)	
219	501.316	26.008	(475.308,527.324)		102.145	16.151	27.212	(474.104,528.528)	
220	497.583	26.008	(471.576,523.591)		111.289	17.596	29.648	(467.936,527.231)	
221	509.790	26.008	(483.782,535.797)		88.388	13.975	23.547	(486.243,533.336)	
222	499.203	26.008	(473.196,525.211)		84.984	13.437	22.640	(476.564,521.843)	
223	477.885	26.008	(451.877,503.892)		109.414	17.300	29.148	(448.737,507.033)	
224	502.236	26.008	(476.228,528.243)		99.302	15.701	26.454	(475.782,528.690)	
225	477.327	26.008	(451.320,503.335)		122.194	19.321	32.553	(444.775,509.880)	
226	517.020	26.008	(491.012,543.027)		88.801	14.041	23.657	(493.363,540.677)	
227	504.761	26.008	(478.753,530.768)		92.055	14.555	24.524	(480.237,529.285)	
228	496.817	26.008	(470.809,522.825)		94.410	14.928	25.151	(471.666,521.968)	
229	501.402	26.008	(475.394,527.409)		106.971	16.914	28.497	(472.905,529.899)	
230	502.676	26.008	(476.669,528.684)		87.855	13.891	23.405	(479.272,526.081)	
231	523.907	26.008	(497.900,549.915)		91.121	14.407	24.275	(499.633,548.182)	
232	485.759	26.008	(459.751,511.767)		99.526	15.736	26.514	(459.245,512.273)	
233	524.157	26.008	(498.150,550.165)		80.512	12.730	21.449	(502.709,545.606)	FAIL
234	492.610	26.008	(466.603,518.618)		121.783	19.256	32.443	(460.167,525.054)	
235	514.652	26.008	(488.645,540.660)		112.481	17.785	29.965	(484.687,544.618)	
236	505.010	26.008	(479.003,531.018)		109.400	17.298	29.144	(475.866,534.155)	
237	519.571	26.008	(493.563,545.578)		106.594	16.854	28.397	(491.174,547.968)	
238	533.923	26.008	(507.915,559.930)	FAIL	105.141	16.624	28.010	(505.913,561.933)	FAIL
239	465.497	26.008	(439.489,491.504)	FAIL	110.364	17.450	29.401	(436.096,494.898)	FAIL
240	505.243	26.008	(479.235,531.250)		108.780	17.200	28.979	(476.264,534.222)	
241	510.511	26.008	(484.504,536.519)		92.226	14.582	24.569	(485.942,535.080)	
242	491.989	26.008	(465.982,517.997)		118.729	18.773	31.630	(460.360,523.619)	
243	496.907	26.008	(470.900,522.915)		93.999	14.863	25.041	(471.866,521.949)	
244	534.069	26.008	(508.061,560.077)	FAIL	94.162	14.888	25.085	(508.984,559.154)	FAIL
245	494.952	26.008	(468.945,520.960)		86.827	13.729	23.131	(471.821,518.083)	
246	506.820	26.008	(480.812,532.827)		83.741	13.241	22.309	(484.511,529.128)	
247	519.710	26.008	(493.703,545.718)		98.523	15.578	26.247	(493.463,545.957)	
248	508.961	26.008	(482.954,534.969)		113.045	17.874	30.115	(478.846,539.076)	
249	498.638	26.008	(472.630,524.645)		108.136	17.098	28.807	(469.831,527.445)	
250	521.700	26.008	(495.692,547.707)		93.857	14.840	25.004	(496.696,546.703)	
251	501.788	26.008	(475.781,527.796)		92.853	14.681	24.736	(477.052,526.524)	
252	474.513	26.008	(448.506,500.521)		76.827	12.147	20.467	(454.047,494.980)	FAIL
253	516.438	26.008	(490.430,542.445)		110.890	17.533	29.541	(486.896,545.979)	
254	519.305	26.008	(493.297,545.312)		110.457	17.465	29.426	(489.879,548.731)	
255	506.291	26.008	(480.284,532.299)		111.738	17.667	29.767	(476.524,536.058)	
256	523.628	26.008	(497.621,549.636)		89.667	14.178	23.887	(499.741,547.516)	
257	503.149	26.008	(477.142,529.157)		77.260	12.216	20.582	(482.567,523.731)	
258	510.104	26.008	(484.097,536.112)		88.802	14.041	23.657	(486.447,533.761)	
259	477.900	26.008	(451.892,503.907)		91.135	14.410	24.279	(453.621,502.178)	
260	511.077	26.008	(485.070,537.085)		116.803	18.468	31.117	(479.961,542.194)	

261	492.126	26.008	(466.119,518.134)		69.159	10.935	18.424	(473.702,510.550)	
262	480.649	26.008	(454.642,506.657)		82.916	13.110	22.089	(458.560,502.738)	
263	504.859	26.008	(478.852,530.867)		103.638	16.387	27.609	(477.250,532.468)	
264	518.444	26.008	(492.437,544.452)		95.001	15.021	25.308	(493.136,543.753)	
265	483.646	26.008	(457.638,509.653)		102.223	16.163	27.232	(456.413,510.878)	
266	502.058	26.008	(476.050,528.065)		83.982	13.279	22.373	(479.685,524.430)	
267	485.967	26.008	(459.960,511.975)		93.910	14.849	25.018	(460.949,510.985)	
268	454.376	26.008	(428.369,480.384)	FAIL	112.355	17.765	29.931	(424.445,484.308)	FAIL
269	509.318	26.008	(483.311,535.326)		94.405	14.927	25.150	(484.168,534.468)	
270	511.910	26.008	(485.902,537.917)		105.881	16.741	28.207	(483.703,540.117)	
271	498.117	26.008	(472.110,524.125)		91.627	14.488	24.410	(473.708,522.527)	
272	500.675	26.008	(474.668,526.683)		107.571	17.009	28.657	(472.018,529.332)	
273	475.202	26.008	(449.194,501.209)		117.842	18.632	31.393	(443.808,506.595)	
274	484.316	26.008	(458.308,510.324)		77.343	12.229	20.604	(463.712,504.920)	
275	511.340	26.008	(485.333,537.348)		94.752	14.982	25.242	(486.098,536.583)	
276	501.213	26.008	(475.205,527.220)		103.411	16.351	27.549	(473.664,528.762)	
277	489.649	26.008	(463.641,515.656)		117.733	18.615	31.364	(458.284,521.013)	
278	499.975	26.008	(473.967,525.982)		85.783	13.564	22.853	(477.122,522.827)	
279	472.810	26.008	(446.803,498.818)	FAIL	88.067	13.925	23.461	(449.349,496.272)	FAIL
280	492.832	26.008	(466.824,518.839)		123.535	19.533	32.910	(459.922,525.742)	
281	484.265	26.008	(458.257,510.272)		95.220	15.056	25.367	(458.898,509.631)	
282	487.047	26.008	(461.040,513.055)		93.202	14.736	24.829	(462.218,511.876)	
283	505.678	26.008	(479.670,531.685)		91.028	14.393	24.250	(481.428,529.928)	
284	501.751	26.008	(475.744,527.759)		90.383	14.291	24.078	(477.673,525.829)	
285	490.577	26.008	(464.570,516.585)		80.731	12.765	21.507	(469.070,512.084)	
286	488.617	26.008	(462.610,514.625)		90.522	14.313	24.115	(464.502,512.732)	
287	502.738	26.008	(476.731,528.746)		100.992	15.968	26.904	(475.834,529.642)	
288	471.917	26.008	(445.909,497.924)	FAIL	108.339	17.130	28.862	(443.055,500.778)	
289	477.431	26.008	(451.423,503.438)		93.859	14.840	25.004	(452.427,502.435)	
290	527.204	26.008	(501.196,553.211)	FAIL	110.170	17.419	29.349	(497.854,556.553)	
291	495.811	26.008	(469.803,521.818)		111.558	17.639	29.719	(466.092,525.530)	
292	495.106	26.008	(469.098,521.113)		96.211	15.212	25.631	(469.475,520.736)	
293	451.677	26.008	(425.670,477.685)	FAIL	97.996	15.494	26.106	(425.571,477.783)	FAIL
294	510.303	26.008	(484.295,536.310)		109.693	17.344	29.222	(481.080,539.525)	
295	510.510	26.008	(484.502,536.517)		96.024	15.183	25.581	(484.929,536.091)	
296	509.297	26.008	(483.289,535.304)		78.467	12.407	20.904	(488.393,530.200)	
297	497.632	26.008	(471.624,523.639)		113.990	18.023	30.367	(467.265,527.999)	
298	512.136	26.008	(486.128,538.143)		86.280	13.642	22.985	(489.150,535.121)	
299	534.921	26.008	(508.914,560.929)	FAIL	108.708	17.188	28.960	(505.961,563.881)	FAIL
300	480.569	26.008	(454.562,506.577)		74.194	11.731	19.765	(460.804,500.335)	
301	510.343	26.008	(484.336,536.351)		119.777	18.938	31.909	(478.434,542.252)	
302	479.520	26.008	(453.512,505.528)		85.480	13.516	22.772	(456.748,502.292)	
303	493.853	26.008	(467.845,519.860)		95.749	15.139	25.508	(468.345,519.361)	

304	500.441	26.008	(474.433,526.448)		120.463	19.047	32.091	(468.349,532.532)	
305	491.336	26.008	(465.329,517.344)		95.826	15.151	25.528	(465.808,516.864)	
306	501.408	26.008	(475.400,527.415)		86.933	13.745	23.159	(478.249,524.567)	
307	534.665	26.008	(508.657,560.672)	FAIL	117.560	18.588	31.318	(503.347,565.983)	FAIL
308	476.873	26.008	(450.866,502.881)		93.104	14.721	24.803	(452.070,501.676)	
309	523.489	26.008	(497.482,549.497)		120.529	19.057	32.109	(491.380,555.598)	
310	489.211	26.008	(463.203,515.218)		93.685	14.813	24.958	(464.253,514.169)	
311	506.787	26.008	(480.779,532.795)		89.833	14.204	23.932	(482.855,530.719)	
312	520.951	26.008	(494.943,546.958)		104.376	16.503	27.806	(493.145,548.757)	
313	499.005	26.008	(472.998,525.013)		80.584	12.741	21.468	(477.538,520.473)	
314	476.123	26.008	(450.116,502.131)		108.155	17.101	28.813	(447.310,504.936)	
315	503.373	26.008	(477.365,529.380)		100.007	15.813	26.642	(476.731,530.015)	
316	518.484	26.008	(492.477,544.492)		97.099	15.353	25.867	(492.617,544.352)	
317	521.752	26.008	(495.745,547.760)		110.191	17.423	29.355	(492.397,551.107)	
318	513.157	26.008	(487.149,539.164)		93.986	14.860	25.038	(488.119,538.195)	
319	516.243	26.008	(490.236,542.251)		113.082	17.880	30.125	(486.118,546.368)	
320	480.283	26.008	(454.275,506.290)		91.591	14.482	24.400	(455.883,504.682)	
321	488.094	26.008	(462.086,514.101)		93.698	14.815	24.961	(463.133,513.055)	
322	469.483	26.008	(443.476,495.491)	FAIL	88.790	14.039	23.654	(445.829,493.137)	FAIL
323	523.882	26.008	(497.874,549.890)		91.359	14.445	24.338	(499.544,548.220)	
324	498.942	26.008	(472.934,524.949)		115.193	18.214	30.688	(468.254,529.629)	
325	525.396	26.008	(499.389,551.404)		93.166	14.731	24.820	(500.577,550.216)	FAIL
326	509.956	26.008	(483.948,535.963)		75.469	11.933	20.105	(489.851,530.061)	
327	496.559	26.008	(470.551,522.566)		87.894	13.897	23.415	(473.143,519.974)	
328	522.462	26.008	(496.455,548.470)		88.384	13.975	23.546	(498.917,546.008)	
329	516.304	26.008	(490.297,542.312)		104.586	16.536	27.862	(488.443,544.166)	
330	441.616	26.008	(415.608,467.623)	FAIL	99.229	15.690	26.435	(415.181,468.051)	FAIL
331	514.843	26.008	(488.835,540.851)		97.082	15.350	25.863	(488.980,540.706)	
332	510.196	26.008	(484.188,536.203)		103.142	16.308	27.477	(482.719,537.673)	
333	493.231	26.008	(467.223,519.238)		111.960	17.702	29.826	(463.404,523.057)	
334	512.646	26.008	(486.639,538.654)		97.581	15.429	25.996	(486.651,538.642)	
335	496.404	26.008	(470.396,522.411)		99.425	15.720	26.487	(469.917,522.891)	
336	497.206	26.008	(471.198,523.213)		102.976	16.282	27.433	(469.773,524.638)	
337	473.351	26.008	(447.344,499.359)	FAIL	85.418	13.506	22.755	(450.596,496.107)	FAIL
338	484.535	26.008	(458.527,510.542)		96.571	15.269	25.727	(458.808,510.261)	
339	498.206	26.008	(472.199,524.214)		98.803	15.622	26.321	(471.885,524.527)	
340	490.803	26.008	(464.796,516.811)		117.412	18.564	31.279	(459.525,522.082)	
341	480.306	26.008	(454.299,506.314)		122.811	19.418	32.717	(447.589,513.024)	
342	495.192	26.008	(469.185,521.200)		97.592	15.431	25.999	(469.194,521.191)	
343	481.608	26.008	(455.601,507.616)		90.561	14.319	24.126	(457.483,505.734)	
344	523.885	26.008	(497.877,549.892)		105.610	16.698	28.135	(495.750,552.019)	
345	507.533	26.008	(481.525,533.540)		96.680	15.286	25.756	(481.777,533.288)	
346	511.604	26.008	(485.596,537.611)		88.220	13.949	23.502	(488.102,535.106)	



347	487.794	26.008	(461.786,513.801)		96.725	15.294	25.768	(462.026,513.561)	
348	489.931	26.008	(463.923,515.939)		89.037	14.078	23.719	(466.212,513.650)	
349	493.895	26.008	(467.887,519.902)		101.983	16.125	27.168	(466.726,521.063)	
350	497.982	26.008	(471.975,523.990)		85.968	13.593	22.902	(475.080,520.884)	
351	511.962	26.008	(485.954,537.969)		107.073	16.930	28.524	(483.437,540.486)	
352	505.002	26.008	(478.994,531.009)		104.642	16.545	27.877	(477.125,532.878)	
353	487.484	26.008	(461.476,513.491)		116.961	18.493	31.159	(456.325,518.643)	
354	525.021	26.008	(499.014,551.029)		115.641	18.284	30.807	(494.214,555.828)	
355	488.653	26.008	(462.646,514.661)		101.137	15.991	26.943	(461.710,515.596)	
356	497.388	26.008	(471.380,523.395)		92.765	14.667	24.713	(472.675,522.100)	
357	509.272	26.008	(483.264,535.279)		83.821	13.253	22.330	(486.942,531.602)	
358	484.581	26.008	(458.574,510.589)		109.239	17.272	29.102	(455.480,513.683)	
359	489.035	26.008	(463.027,515.042)		113.986	18.023	30.366	(458.669,519.401)	
360	505.696	26.008	(479.689,531.704)		114.750	18.144	30.569	(475.127,536.266)	
361	506.033	26.008	(480.025,532.040)		104.368	16.502	27.804	(478.229,533.837)	
362	524.149	26.008	(498.142,550.157)		118.312	18.707	31.519	(492.631,555.668)	
363	500.041	26.008	(474.034,526.049)		99.958	15.805	26.629	(473.412,526.670)	
364	484.749	26.008	(458.741,510.756)		92.990	14.703	24.773	(459.976,509.521)	
365	524.361	26.008	(498.353,550.369)		120.243	19.012	32.033	(492.328,556.394)	
366	504.565	26.008	(478.558,530.573)		82.526	13.048	21.985	(482.581,526.550)	
367	525.222	26.008	(499.214,551.229)		104.350	16.499	27.799	(497.423,553.021)	
368	491.224	26.008	(465.217,517.232)		101.407	16.034	27.015	(464.210,518.239)	
369	519.552	26.008	(493.544,545.559)		115.781	18.307	30.844	(488.708,550.396)	
370	491.809	26.008	(465.801,517.816)		110.148	17.416	29.344	(462.465,521.152)	
371	503.370	26.008	(477.362,529.378)		106.882	16.900	28.474	(474.896,531.844)	
372	516.741	26.008	(490.734,542.749)		113.058	17.876	30.119	(486.622,546.860)	
373	506.773	26.008	(480.766,532.781)		109.756	17.354	29.239	(477.534,536.013)	
374	505.398	26.008	(479.391,531.406)		82.566	13.055	21.996	(483.402,527.394)	
375	528.839	26.008	(502.832,554.847)	FAIL	121.055	19.140	32.249	(496.590,561.089)	
376	476.764	26.008	(450.756,502.771)		93.125	14.724	24.809	(451.955,501.572)	
377	498.802	26.008	(472.795,524.810)		126.487	19.999	33.696	(465.106,532.499)	
378	506.560	26.008	(480.552,532.567)		87.308	13.805	23.259	(483.301,529.819)	
379	497.439	26.008	(471.432,523.447)		105.848	16.736	28.198	(469.241,525.638)	
380	517.728	26.008	(491.721,543.736)		101.849	16.104	27.133	(490.596,544.861)	
381	508.698	26.008	(482.691,534.706)		94.758	14.983	25.244	(483.454,533.942)	
382	516.533	26.008	(490.525,542.540)		112.697	17.819	30.023	(486.510,546.556)	
383	489.312	26.008	(463.304,515.319)		101.055	15.978	26.921	(462.390,516.233)	
384	494.835	26.008	(468.827,520.842)		78.462	12.406	20.902	(473.933,515.737)	
385	508.559	26.008	(482.552,534.567)		90.949	14.380	24.229	(484.331,532.788)	
386	510.214	26.008	(484.207,536.222)		87.991	13.913	23.441	(486.773,533.655)	
387	478.003	26.008	(451.996,504.011)		109.086	17.248	29.061	(448.943,507.064)	
388	495.998	26.008	(469.990,522.005)		88.762	14.035	23.646	(472.351,519.644)	
389	526.646	26.008	(500.639,552.654)	FAIL	105.482	16.678	28.100	(498.546,554.747)	

390	511.635	26.008	(485.628,537.643)		92.833	14.678	24.731	(486.904,536.366)	
391	504.780	26.008	(478.772,530.787)		96.506	15.259	25.709	(479.070,530.489)	
392	493.530	26.008	(467.523,519.538)		103.320	16.336	27.525	(466.006,521.055)	
393	484.832	26.008	(458.825,510.840)		104.955	16.595	27.960	(456.872,512.792)	
394	515.027	26.008	(489.020,541.035)		73.855	11.677	19.675	(495.352,534.702)	
395	490.167	26.008	(464.159,516.174)		131.387	20.774	35.002	(455.165,525.168)	
396	488.624	26.008	(462.617,514.632)		98.804	15.622	26.321	(462.303,514.946)	
397	509.771	26.008	(483.763,535.779)		102.706	16.239	27.361	(482.410,537.132)	
398	490.977	26.008	(464.969,516.984)		110.208	17.425	29.360	(461.617,520.336)	
399	512.047	26.008	(486.039,538.054)		98.773	15.617	26.313	(485.733,538.360)	
400	512.740	26.008	(486.732,538.747)		98.869	15.632	26.339	(486.401,539.079)	
401	507.559	26.008	(481.551,533.566)		86.523	13.680	23.050	(484.509,530.608)	
402	524.639	26.008	(498.631,550.646)		94.480	14.939	25.170	(499.469,549.808)	
403	515.113	26.008	(489.105,541.121)		100.478	15.887	26.768	(488.345,541.881)	
404	522.692	26.008	(496.684,548.699)		110.664	17.498	29.481	(493.211,552.173)	
405	497.751	26.008	(471.743,523.758)		79.433	12.559	21.161	(476.590,518.912)	
406	501.947	26.008	(475.939,527.954)		116.679	18.449	31.083	(470.863,533.030)	
407	477.170	26.008	(451.163,503.178)		106.907	16.904	28.480	(448.690,505.651)	
408	509.003	26.008	(482.996,535.011)		83.985	13.279	22.374	(486.630,531.377)	
409	506.071	26.008	(480.063,532.078)		95.130	15.041	25.343	(480.728,531.414)	
410	493.981	26.008	(467.974,519.989)		108.727	17.191	28.965	(465.017,522.946)	
411	494.951	26.008	(468.943,520.958)		89.439	14.142	23.827	(471.124,518.777)	
412	493.946	26.008	(467.938,519.953)		77.786	12.299	20.722	(473.224,514.668)	
413	491.992	26.008	(465.984,517.999)		89.313	14.122	23.793	(468.199,515.785)	
414	497.989	26.008	(471.981,523.996)		87.898	13.898	23.416	(474.572,521.405)	
415	504.883	26.008	(478.875,530.890)		94.262	14.904	25.112	(479.771,529.994)	
416	491.863	26.008	(465.855,517.870)		110.812	17.521	29.521	(462.342,521.383)	
417	492.569	26.008	(466.561,518.576)		84.565	13.371	22.528	(470.041,515.097)	
418	519.661	26.008	(493.654,545.669)		87.449	13.827	23.297	(496.365,542.958)	
419	506.993	26.008	(480.985,533.000)		123.135	19.469	32.803	(474.189,539.796)	
420	475.824	26.008	(449.816,501.831)		109.144	17.257	29.076	(446.748,504.900)	
421	511.896	26.008	(485.888,537.903)		93.242	14.743	24.840	(487.056,536.735)	
422	512.358	26.008	(486.350,538.365)		109.529	17.318	29.179	(483.179,541.537)	
423	499.792	26.008	(473.784,525.799)		94.653	14.966	25.216	(474.576,525.007)	
424	507.945	26.008	(481.938,533.953)		87.575	13.847	23.330	(484.615,531.275)	
425	491.698	26.008	(465.690,517.705)		91.231	14.425	24.304	(467.393,516.002)	
426	513.290	26.008	(487.282,539.297)		101.993	16.127	27.171	(486.118,540.461)	
427	478.713	26.008	(452.706,504.721)		84.396	13.344	22.483	(456.230,501.196)	
428	494.264	26.008	(468.257,520.272)		87.411	13.821	23.286	(470.978,517.551)	
429	505.990	26.008	(479.983,531.998)		81.770	12.929	21.784	(484.206,527.774)	
430	522.359	26.008	(496.352,548.367)		94.292	14.909	25.119	(497.240,547.479)	
431	492.125	26.008	(466.118,518.133)		108.584	17.169	28.927	(463.199,521.052)	
432	506.985	26.008	(480.978,532.993)		93.726	14.819	24.969	(482.017,531.954)	

433	488.038	26.008	(462.031,514.046)		131.122	20.732	34.931	(453.107,522.969)	
434	489.063	26.008	(463.055,515.070)		126.347	19.977	33.659	(455.404,522.722)	
435	497.989	26.008	(471.981,523.996)		115.936	18.331	30.885	(467.103,528.874)	
436	482.933	26.008	(456.926,508.941)		97.859	15.473	26.070	(456.864,509.003)	
437	496.460	26.008	(470.453,522.468)		87.770	13.878	23.382	(473.078,519.842)	
438	529.837	26.008	(503.829,555.844)	FAIL	76.288	12.062	20.323	(509.514,550.160)	FAIL
439	479.125	26.008	(453.117,505.132)		99.587	15.746	26.530	(452.594,505.655)	
440	515.622	26.008	(489.615,541.630)		117.834	18.631	31.391	(484.231,547.013)	
441	476.431	26.008	(450.424,502.439)		90.384	14.291	24.078	(452.353,500.510)	
442	496.848	26.008	(470.841,522.856)		109.943	17.383	29.289	(467.560,526.137)	
443	507.799	26.008	(481.792,533.807)		115.337	18.236	30.726	(477.073,538.525)	
444	509.615	26.008	(483.608,535.623)		107.111	16.936	28.535	(481.081,538.150)	
445	493.502	26.008	(467.494,519.509)		99.488	15.730	26.504	(466.998,520.005)	
446	503.656	26.008	(477.648,529.663)		98.856	15.630	26.335	(477.320,529.991)	
447	486.666	26.008	(460.658,512.673)		81.256	12.848	21.647	(465.019,508.312)	
448	507.062	26.008	(481.054,533.069)		101.473	16.044	27.032	(480.029,534.094)	
449	501.695	26.008	(475.688,527.703)		90.937	14.378	24.226	(477.470,525.921)	
450	507.661	26.008	(481.654,533.669)		88.410	13.979	23.553	(484.109,531.214)	
451	494.419	26.008	(468.412,520.427)		102.194	16.158	27.225	(467.194,521.644)	
452	463.549	26.008	(437.542,489.557)	FAIL	106.762	16.881	28.442	(435.108,491.991)	FAIL
453	507.702	26.008	(481.694,533.709)		94.910	15.007	25.284	(482.418,532.986)	
454	483.131	26.008	(457.123,509.138)		104.270	16.487	27.778	(455.353,510.908)	
455	489.664	26.008	(463.657,515.672)		103.363	16.343	27.536	(462.128,517.200)	
456	490.264	26.008	(464.256,516.271)		98.566	15.585	26.258	(464.006,516.522)	
457	518.867	26.008	(492.860,544.875)		102.655	16.231	27.347	(491.520,546.214)	
458	499.189	26.008	(473.182,525.197)		101.405	16.033	27.014	(472.175,526.203)	
459	507.324	26.008	(481.317,533.332)		65.698	10.388	17.502	(489.822,524.826)	
460	495.552	26.008	(469.545,521.560)		81.691	12.916	21.763	(473.790,517.315)	
461	498.529	26.008	(472.521,524.536)		112.644	17.811	30.008	(468.521,528.537)	
462	480.998	26.008	(454.991,507.006)		103.265	16.328	27.510	(453.488,508.508)	
463	474.474	26.008	(448.467,500.482)		109.119	17.253	29.069	(445.405,503.544)	
464	505.481	26.008	(479.473,531.488)		101.656	16.073	27.081	(478.399,532.562)	
465	500.741	26.008	(474.734,526.749)		91.365	14.446	24.340	(476.402,525.081)	
466	491.109	26.008	(465.102,517.117)		102.307	16.176	27.255	(463.855,518.364)	
467	496.790	26.008	(470.783,522.798)		113.088	17.881	30.127	(466.664,526.917)	
468	488.605	26.008	(462.597,514.612)		112.146	17.732	29.876	(458.729,518.481)	
469	497.582	26.008	(471.574,523.589)		118.929	18.804	31.683	(465.899,529.265)	
470	470.718	26.008	(444.710,496.725)	FAIL	99.256	15.694	26.442	(444.276,497.160)	FAIL
471	508.501	26.008	(482.494,534.509)		96.990	15.335	25.838	(482.663,534.339)	
472	521.746	26.008	(495.738,547.753)		88.134	13.935	23.479	(498.267,545.225)	
473	492.567	26.008	(466.560,518.575)		118.651	18.760	31.609	(460.958,524.176)	
474	487.868	26.008	(461.861,513.876)		94.949	15.013	25.295	(462.574,513.163)	
475	497.392	26.008	(471.384,523.399)		87.876	13.894	23.410	(473.981,520.802)	

476	484.382	26.008	(458.375,510.390)		89.326	14.124	23.796	(460.586,508.179)	
477	498.319	26.008	(472.312,524.327)		123.348	19.503	32.860	(465.459,531.180)	
478	487.025	26.008	(461.018,513.033)		91.144	14.411	24.281	(462.744,511.306)	
479	482.816	26.008	(456.808,508.823)		107.595	17.012	28.663	(454.152,511.479)	
480	514.978	26.008	(488.971,540.986)		95.899	15.163	25.548	(489.431,540.526)	
481	472.795	26.008	(446.787,498.802)	FAIL	93.026	14.709	24.782	(448.013,497.577)	FAIL
482	512.075	26.008	(486.067,538.082)		111.855	17.686	29.798	(482.277,541.873)	
483	486.934	26.008	(460.926,512.941)		97.438	15.406	25.958	(460.976,512.891)	
484	504.342	26.008	(478.335,530.350)		87.181	13.785	23.225	(481.117,527.568)	
485	499.701	26.008	(473.693,525.708)		105.509	16.682	28.108	(471.593,527.809)	
486	480.795	26.008	(454.787,506.802)		89.513	14.153	23.846	(456.948,504.641)	
487	496.578	26.008	(470.570,522.585)		115.328	18.235	30.723	(465.854,527.301)	
488	502.631	26.008	(476.623,528.638)		113.500	17.946	30.237	(472.394,532.867)	
489	509.609	26.008	(483.602,535.617)		95.620	15.119	25.473	(484.136,535.083)	
490	535.324	26.008	(509.316,561.331)	FAIL	112.401	17.772	29.944	(505.380,565.268)	FAIL
491	529.594	26.008	(503.587,555.602)	FAIL	125.712	19.877	33.490	(496.105,563.084)	
492	480.829	26.008	(454.821,506.836)		110.447	17.463	29.423	(451.406,510.252)	
493	510.993	26.008	(484.986,537.001)		90.291	14.276	24.054	(486.940,535.047)	
494	480.026	26.008	(454.019,506.034)		90.221	14.265	24.035	(455.991,504.061)	
495	476.755	26.008	(450.747,502.762)		89.909	14.216	23.952	(452.803,500.707)	
496	478.005	26.008	(451.997,504.012)		63.363	10.019	16.880	(461.125,494.885)	FAIL
497	502.099	26.008	(476.091,528.106)		95.226	15.057	25.368	(476.730,527.467)	
498	508.800	26.008	(482.792,534.807)		83.072	13.135	22.130	(486.669,530.930)	
499	478.677	26.008	(452.669,504.684)		113.027	17.871	30.111	(448.566,508.787)	
500	498.623	26.008	(472.616,524.631)		84.119	13.300	22.410	(476.214,521.033)	
501	499.553	26.008	(473.545,525.561)		76.852	12.151	20.473	(479.080,520.026)	
502	467.325	26.008	(441.317,493.332)	FAIL	108.061	17.086	28.788	(438.537,496.113)	FAIL
503	486.060	26.008	(460.053,512.068)		110.104	17.409	29.332	(456.728,515.392)	
504	490.909	26.008	(464.902,516.917)		110.923	17.538	29.550	(461.359,520.459)	
505	500.173	26.008	(474.165,526.181)		74.366	11.758	19.811	(480.362,519.984)	
506	494.891	26.008	(468.884,520.899)		98.373	15.554	26.207	(468.684,521.098)	
507	488.620	26.008	(462.612,514.627)		108.348	17.131	28.864	(459.756,517.484)	
508	496.955	26.008	(470.947,522.962)		104.714	16.557	27.896	(469.059,524.850)	
509	521.474	26.008	(495.467,547.482)		105.354	16.658	28.066	(493.408,549.541)	
510	502.145	26.008	(476.138,528.153)		112.547	17.795	29.983	(472.163,532.128)	
511	507.573	26.008	(481.565,533.580)		108.501	17.156	28.905	(478.668,536.478)	
512	535.187	26.008	(509.179,561.194)	FAIL	112.545	17.795	29.982	(505.205,565.169)	FAIL
513	493.459	26.008	(467.451,519.466)		87.679	13.863	23.358	(470.101,516.817)	
514	487.455	26.008	(461.448,513.463)		80.384	12.710	21.414	(466.041,508.870)	
515	456.657	26.008	(430.649,482.664)	FAIL	92.763	14.667	24.712	(431.945,481.369)	FAIL
516	509.796	26.008	(483.789,535.804)		118.630	18.757	31.603	(478.193,541.399)	
517	532.621	26.008	(506.613,558.628)	FAIL	103.807	16.413	27.654	(504.966,560.275)	FAIL
518	503.515	26.008	(477.507,529.522)		86.103	13.614	22.938	(480.577,526.453)	

519	497.775	26.008	(471.767,523.782)		95.492	15.099	25.439	(472.335,523.214)	
520	502.901	26.008	(476.893,528.908)		92.510	14.627	24.645	(478.256,527.545)	
521	503.823	26.008	(477.816,529.831)		83.174	13.151	22.158	(481.665,525.981)	
522	488.606	26.008	(462.599,514.614)		77.396	12.237	20.618	(467.988,509.225)	
523	504.335	26.008	(478.327,530.342)		108.709	17.188	28.960	(475.375,533.295)	
524	531.808	26.008	(505.801,557.816)	FAIL	92.866	14.683	24.740	(507.069,556.548)	FAIL
525	503.783	26.008	(477.776,529.791)		82.871	13.103	22.077	(481.707,525.860)	
526	484.069	26.008	(458.061,510.076)		104.781	16.567	27.914	(456.155,511.982)	
527	491.807	26.008	(465.800,517.815)		104.607	16.540	27.867	(463.940,519.675)	
528	501.926	26.008	(475.918,527.933)		93.322	14.756	24.861	(477.064,526.787)	
529	515.129	26.008	(489.122,541.137)		85.523	13.522	22.784	(492.346,537.913)	
530	521.381	26.008	(495.374,547.389)		93.369	14.763	24.874	(496.507,546.255)	
531	483.910	26.008	(457.902,509.917)		84.849	13.416	22.604	(461.306,506.514)	
532	545.554	26.008	(519.546,571.561)	FAIL	129.377	20.456	34.466	(511.088,580.020)	FAIL
533	509.619	26.008	(483.611,535.627)		92.301	14.594	24.589	(485.030,534.208)	
534	489.143	26.008	(463.135,515.150)		84.006	13.283	22.379	(466.763,511.522)	
535	518.914	26.008	(492.907,544.922)		96.681	15.287	25.756	(493.158,544.670)	
536	486.902	26.008	(460.895,512.910)		74.069	11.711	19.732	(467.170,506.634)	
537	487.853	26.008	(461.846,513.861)		79.640	12.592	21.216	(466.637,509.069)	
538	501.841	26.008	(475.833,527.848)		95.140	15.043	25.345	(476.495,527.186)	
539	497.620	26.008	(471.612,523.627)		84.711	13.394	22.567	(475.053,520.187)	
540	520.331	26.008	(494.324,546.339)		103.141	16.308	27.477	(492.854,547.808)	
541	510.098	26.008	(484.091,536.106)		100.249	15.851	26.706	(483.392,536.805)	
542	498.029	26.008	(472.021,524.036)		98.273	15.538	26.180	(471.849,524.209)	
543	531.831	26.008	(505.823,557.838)	FAIL	78.606	12.429	20.941	(510.890,552.771)	FAIL
544	497.806	26.008	(471.799,523.814)		100.812	15.940	26.856	(470.950,524.663)	
545	495.482	26.008	(469.475,521.490)		97.604	15.433	26.002	(469.481,521.484)	
546	525.025	26.008	(499.018,551.033)		98.474	15.570	26.234	(498.792,551.259)	
547	534.125	26.008	(508.118,560.133)	FAIL	100.345	15.866	26.732	(507.393,560.857)	FAIL
548	483.864	26.008	(457.857,509.872)		109.564	17.324	29.188	(454.676,513.052)	
549	508.303	26.008	(482.295,534.310)		97.915	15.482	26.085	(482.218,534.387)	
550	519.816	26.008	(493.809,545.824)		102.100	16.143	27.200	(492.617,547.016)	
551	487.315	26.008	(461.308,513.323)		92.231	14.583	24.571	(462.745,511.886)	
552	484.242	26.008	(458.235,510.250)		104.266	16.486	27.777	(456.465,512.019)	
553	508.950	26.008	(482.942,534.957)		87.302	13.804	23.257	(485.692,532.207)	
554	501.808	26.008	(475.801,527.816)		102.618	16.225	27.338	(474.471,529.146)	
555	496.908	26.008	(470.900,522.915)		105.435	16.671	28.088	(468.820,524.996)	
556	495.469	26.008	(469.462,521.477)		124.877	19.745	33.268	(462.202,528.737)	
557	488.420	26.008	(462.412,514.428)		79.393	12.553	21.150	(467.270,509.570)	
558	524.521	26.008	(498.514,550.529)		110.801	17.519	29.518	(495.004,554.039)	
559	496.389	26.008	(470.381,522.396)		114.001	18.025	30.370	(466.019,526.759)	
560	501.758	26.008	(475.751,527.766)		92.757	14.666	24.711	(477.048,526.469)	
561	500.431	26.008	(474.423,526.438)		110.720	17.506	29.496	(470.935,529.927)	

562	507.640	26.008	(481.632,533.647)		102.295	16.174	27.251	(480.389,534.891)	
563	482.926	26.008	(456.918,508.933)		76.339	12.070	20.337	(462.589,503.262)	
564	514.495	26.008	(488.487,540.502)		95.803	15.148	25.522	(488.973,540.017)	
565	495.539	26.008	(469.532,521.547)		104.676	16.551	27.886	(467.654,523.425)	
566	494.591	26.008	(468.583,520.598)		90.012	14.232	23.979	(470.611,518.570)	
567	506.112	26.008	(480.104,532.119)		98.856	15.630	26.335	(479.776,532.447)	
568	510.663	26.008	(484.655,536.670)		108.541	17.162	28.915	(481.747,539.578)	
569	511.585	26.008	(485.578,537.593)		87.855	13.891	23.405	(488.180,534.990)	
570	522.194	26.008	(496.187,548.202)		88.315	13.964	23.527	(498.667,545.722)	
571	549.083	26.008	(523.076,575.091)	FAIL	99.217	15.688	26.431	(522.652,575.515)	FAIL
572	506.075	26.008	(480.067,532.082)		90.973	14.384	24.235	(481.840,530.310)	
573	476.471	26.008	(450.464,502.479)		103.367	16.344	27.537	(448.934,504.008)	
574	506.270	26.008	(480.262,532.277)		119.385	18.876	31.804	(474.465,538.074)	
575	483.721	26.008	(457.714,509.729)		88.986	14.070	23.706	(460.015,507.427)	
576	508.202	26.008	(482.195,534.210)		102.956	16.279	27.428	(480.775,535.630)	
577	496.687	26.008	(470.680,522.695)		95.548	15.107	25.454	(471.233,522.141)	
578	491.949	26.008	(465.942,517.957)		100.058	15.821	26.656	(465.294,518.605)	
579	503.793	26.008	(477.786,529.801)		117.138	18.521	31.206	(472.588,534.999)	
580	506.591	26.008	(480.584,532.599)		103.516	16.367	27.577	(479.014,534.168)	
581	525.203	26.008	(499.196,551.211)		91.110	14.406	24.272	(500.931,549.475)	FAIL
582	509.438	26.008	(483.430,535.445)		87.732	13.872	23.372	(486.066,532.810)	
583	501.390	26.008	(475.383,527.398)		110.280	17.437	29.379	(472.011,530.769)	
584	514.484	26.008	(488.477,540.492)		92.185	14.576	24.558	(489.926,539.043)	
585	491.961	26.008	(465.954,517.969)		107.135	16.939	28.541	(463.421,520.502)	
586	463.279	26.008	(437.271,489.286)	FAIL	94.735	14.979	25.238	(438.041,488.516)	FAIL
587	487.000	26.008	(460.992,513.007)		84.405	13.346	22.486	(464.514,509.486)	
588	497.038	26.008	(471.031,523.046)		101.743	16.087	27.105	(469.934,524.143)	
589	506.676	26.008	(480.668,532.683)		97.234	15.374	25.903	(480.773,532.579)	
590	486.291	26.008	(460.283,512.298)		77.201	12.207	20.567	(465.724,506.857)	
591	499.424	26.008	(473.417,525.432)		107.774	17.041	28.711	(470.713,528.136)	
592	511.390	26.008	(485.383,537.398)		88.899	14.056	23.683	(487.707,535.073)	
593	477.860	26.008	(451.852,503.867)		96.661	15.283	25.751	(452.109,503.610)	
594	532.356	26.008	(506.348,558.363)	FAIL	101.692	16.079	27.091	(505.265,559.447)	FAIL
595	488.672	26.008	(462.665,514.680)		103.106	16.302	27.467	(461.205,516.140)	
596	501.228	26.008	(475.220,527.236)		100.064	15.822	26.657	(474.571,527.885)	
597	515.404	26.008	(489.397,541.412)		98.309	15.544	26.190	(489.215,541.594)	
598	509.005	26.008	(482.997,535.012)		98.081	15.508	26.129	(482.876,535.134)	
599	474.267	26.008	(448.259,500.274)		100.539	15.897	26.784	(447.483,501.051)	
600	503.375	26.008	(477.367,529.382)		110.260	17.434	29.373	(474.002,532.748)	
601	491.834	26.008	(465.827,517.842)		112.657	17.813	30.012	(461.822,521.846)	
602	516.697	26.008	(490.690,542.705)		101.463	16.043	27.030	(489.667,543.727)	
603	498.351	26.008	(472.344,524.359)		85.642	13.541	22.815	(475.536,521.166)	
604	465.503	26.008	(439.495,491.510)	FAIL	91.338	14.442	24.333	(441.170,489.835)	FAIL

605	492.975	26.008	(466.968,518.983)		94.601	14.958	25.202	(467.774,518.177)	
606	508.437	26.008	(482.430,534.445)		98.490	15.573	26.238	(482.200,534.675)	
607	497.313	26.008	(471.305,523.320)		109.963	17.387	29.294	(468.019,526.607)	
608	484.113	26.008	(458.105,510.120)		101.157	15.994	26.948	(457.164,511.061)	
609	523.177	26.008	(497.169,549.184)		114.020	18.028	30.375	(492.802,553.552)	
610	509.015	26.008	(483.008,535.023)		107.717	17.032	28.696	(480.319,537.711)	
611	494.018	26.008	(468.010,520.025)		100.008	15.813	26.642	(467.375,520.660)	
612	480.491	26.008	(454.484,506.499)		86.435	13.667	23.026	(457.465,503.517)	
613	502.509	26.008	(476.502,528.517)		95.280	15.065	25.383	(477.127,527.892)	
614	473.973	26.008	(447.966,499.981)	FAIL	90.827	14.361	24.197	(449.777,498.170)	FAIL
615	495.988	26.008	(469.981,521.996)		86.659	13.702	23.086	(472.902,519.074)	
616	464.170	26.008	(438.163,490.178)	FAIL	110.360	17.449	29.400	(434.770,493.570)	FAIL
617	498.624	26.008	(472.617,524.632)		110.437	17.462	29.421	(469.204,528.045)	
618	491.461	26.008	(465.453,517.468)		85.847	13.574	22.870	(468.591,514.331)	
619	515.488	26.008	(489.480,541.496)		87.763	13.877	23.380	(492.108,538.868)	
620	488.053	26.008	(462.046,514.061)		76.076	12.029	20.267	(467.787,508.320)	
621	532.186	26.008	(506.178,558.193)	FAIL	91.567	14.478	24.394	(507.792,556.579)	FAIL
622	477.416	26.008	(451.408,503.423)		94.023	14.866	25.048	(452.368,502.464)	
623	507.143	26.008	(481.135,533.151)		119.007	18.817	31.704	(475.439,538.847)	
624	489.322	26.008	(463.315,515.330)		91.530	14.472	24.384	(464.938,513.706)	
625	527.506	26.008	(501.499,553.514)	FAIL	98.684	15.603	26.290	(501.217,553.796)	FAIL
626	491.075	26.008	(465.067,517.082)		96.421	15.245	25.687	(465.388,516.761)	
627	518.438	26.008	(492.431,544.446)		112.675	17.815	30.017	(488.421,548.455)	
628	480.622	26.008	(454.615,506.630)		72.226	11.420	19.241	(461.381,499.863)	FAIL
629	532.713	26.008	(506.706,558.721)	FAIL	85.749	13.558	22.844	(509.870,555.557)	FAIL
630	481.053	26.008	(455.045,507.060)		118.753	18.776	31.636	(449.417,512.688)	
631	486.692	26.008	(460.684,512.699)		74.027	11.705	19.721	(466.971,506.412)	
632	507.872	26.008	(481.864,533.879)		110.077	17.405	29.325	(478.547,537.196)	
633	477.655	26.008	(451.648,503.663)		97.816	15.466	26.058	(451.597,503.714)	
634	491.690	26.008	(465.682,517.697)		109.751	17.353	29.238	(462.452,520.927)	
635	496.899	26.008	(470.891,522.906)		98.961	15.647	26.363	(470.535,523.262)	
636	519.808	26.008	(493.801,545.816)		102.848	16.262	27.399	(492.409,547.207)	
637	482.691	26.008	(456.683,508.698)		101.291	16.016	26.984	(455.706,509.675)	
638	506.056	26.008	(480.048,532.063)		95.922	15.167	25.554	(480.502,531.610)	
639	478.422	26.008	(452.414,504.429)		98.392	15.557	26.212	(452.210,504.634)	
640	486.461	26.008	(460.454,512.469)		106.854	16.895	28.466	(457.995,514.927)	
641	507.322	26.008	(481.315,533.330)		88.398	13.977	23.549	(483.773,530.872)	
642	497.862	26.008	(471.855,523.870)		108.457	17.149	28.893	(468.969,526.755)	
643	509.781	26.008	(483.774,535.789)		112.008	17.710	29.839	(479.942,539.620)	
644	512.213	26.008	(486.205,538.220)		96.023	15.183	25.581	(486.632,537.793)	
645	516.283	26.008	(490.276,542.291)		124.433	19.675	33.149	(483.134,549.432)	
646	511.531	26.008	(485.524,537.539)		90.401	14.294	24.083	(487.448,535.614)	
647	517.385	26.008	(491.377,543.392)		93.718	14.818	24.967	(492.418,542.351)	

648	483.947	26.008	(457.940,509.955)		79.883	12.631	21.281	(462.666,505.228)	
649	508.724	26.008	(482.716,534.731)		118.692	18.767	31.620	(477.104,540.344)	
650	504.938	26.008	(478.930,530.945)		89.317	14.122	23.794	(481.144,528.732)	
651	494.284	26.008	(468.276,520.291)		92.479	14.622	24.636	(469.647,518.920)	
652	495.728	26.008	(469.720,521.735)		90.743	14.348	24.174	(471.554,519.902)	
653	472.577	26.008	(446.569,498.584)	FAIL	92.102	14.563	24.536	(448.041,497.113)	FAIL
654	501.016	26.008	(475.009,527.024)		117.448	18.570	31.288	(469.728,532.305)	
655	491.996	26.008	(465.988,518.003)		106.784	16.884	28.447	(463.549,520.443)	
656	490.077	26.008	(464.069,516.084)		88.132	13.935	23.478	(466.598,513.555)	
657	478.833	26.008	(452.825,504.840)		87.062	13.766	23.193	(455.639,502.026)	
658	525.646	26.008	(499.638,551.653)		109.667	17.340	29.216	(496.430,554.861)	
659	482.921	26.008	(456.914,508.929)		107.635	17.019	28.674	(454.247,511.596)	
660	487.971	26.008	(461.964,513.979)		102.772	16.250	27.379	(460.593,515.350)	
661	499.494	26.008	(473.487,525.502)		106.815	16.889	28.456	(471.039,527.950)	
662	490.059	26.008	(464.051,516.066)		93.510	14.785	24.911	(465.147,514.970)	
663	502.991	26.008	(476.984,528.999)		104.084	16.457	27.728	(475.263,530.719)	
664	475.153	26.008	(449.146,501.161)		107.697	17.028	28.691	(446.463,503.844)	
665	505.303	26.008	(479.295,531.310)		102.845	16.261	27.398	(477.905,532.701)	
666	483.483	26.008	(457.476,509.491)		95.231	15.057	25.370	(458.113,508.853)	
667	484.683	26.008	(458.675,510.691)		100.899	15.953	26.880	(457.803,511.563)	
668	493.869	26.008	(467.861,519.876)		120.468	19.048	32.093	(461.776,525.961)	
669	514.010	26.008	(488.002,540.017)		98.383	15.556	26.209	(487.800,540.219)	
670	528.644	26.008	(502.636,554.651)	FAIL	95.249	15.060	25.374	(503.269,554.018)	FAIL
671	469.760	26.008	(443.753,495.768)	FAIL	88.961	14.066	23.699	(446.061,493.460)	FAIL
672	505.855	26.008	(479.847,531.862)		103.185	16.315	27.489	(478.366,533.343)	
673	498.869	26.008	(472.861,524.876)		90.924	14.376	24.222	(474.647,523.091)	
674	499.090	26.008	(473.082,525.097)		91.449	14.459	24.362	(474.727,523.452)	
675	500.768	26.008	(474.760,526.775)		81.728	12.922	21.773	(478.995,522.541)	
676	493.403	26.008	(467.395,519.410)		82.641	13.067	22.016	(471.387,515.418)	
677	499.508	26.008	(473.500,525.515)		96.553	15.266	25.722	(473.786,525.229)	
678	477.195	26.008	(451.188,503.203)		87.452	13.827	23.297	(453.898,500.493)	
679	508.656	26.008	(482.649,534.664)		98.411	15.560	26.217	(482.440,534.873)	
680	506.613	26.008	(480.606,532.621)		83.253	13.163	22.179	(484.434,528.792)	
681	518.185	26.008	(492.178,544.193)		88.411	13.979	23.553	(494.633,541.738)	
682	518.388	26.008	(492.380,544.395)		104.601	16.539	27.866	(490.522,546.254)	
683	521.856	26.008	(495.849,547.864)		95.151	15.045	25.348	(496.508,547.205)	
684	505.577	26.008	(479.569,531.584)		88.446	13.985	23.562	(482.015,529.139)	
685	516.200	26.008	(490.192,542.207)		106.475	16.835	28.365	(487.835,544.564)	
686	491.641	26.008	(465.634,517.649)		123.335	19.501	32.856	(458.785,524.498)	
687	490.211	26.008	(464.203,516.218)		93.185	14.734	24.824	(465.386,515.035)	
688	489.749	26.008	(463.742,515.757)		69.143	10.932	18.420	(471.330,508.169)	
689	508.719	26.008	(482.711,534.726)		93.380	14.765	24.876	(483.842,533.595)	
690	512.033	26.008	(486.025,538.041)		106.806	16.887	28.453	(483.580,540.486)	



691	494.255	26.008	(468.248,520.263)		105.310	16.651	28.055	(466.201,522.310)	
692	510.821	26.008	(484.814,536.829)		109.395	17.297	29.143	(481.678,539.964)	
693	508.110	26.008	(482.102,534.118)		98.005	15.496	26.109	(482.001,534.219)	
694	489.150	26.008	(463.143,515.158)		109.999	17.392	29.304	(459.846,518.454)	
695	492.802	26.008	(466.795,518.810)		114.631	18.125	30.538	(462.264,523.340)	
696	501.203	26.008	(475.195,527.210)		108.825	17.207	28.991	(472.212,530.194)	
697	499.571	26.008	(473.563,525.578)		101.857	16.105	27.135	(472.436,526.706)	
698	485.970	26.008	(459.962,511.977)		88.162	13.940	23.487	(462.483,509.456)	
699	523.357	26.008	(497.350,549.365)		117.832	18.631	31.391	(491.967,554.748)	
700	498.156	26.008	(472.148,524.163)		94.998	15.021	25.308	(472.848,523.463)	
701	459.618	26.008	(433.610,485.625)	FAIL	99.807	15.781	26.589	(433.029,486.206)	FAIL
702	474.252	26.008	(448.244,500.259)		118.200	18.689	31.489	(442.763,505.740)	
703	504.815	26.008	(478.808,530.823)		93.770	14.826	24.980	(479.835,529.796)	
704	500.113	26.008	(474.106,526.121)		83.410	13.188	22.221	(477.893,522.334)	
705	494.267	26.008	(468.260,520.275)		103.309	16.335	27.522	(466.746,521.789)	
706	527.174	26.008	(501.166,553.181)	FAIL	109.401	17.298	29.145	(498.029,556.318)	
707	499.740	26.008	(473.732,525.747)		106.186	16.789	28.288	(471.452,528.028)	
708	522.017	26.008	(496.010,548.025)		130.348	20.610	34.725	(487.292,556.742)	
709	517.840	26.008	(491.833,543.848)		93.400	14.768	24.882	(492.958,542.722)	
710	507.426	26.008	(481.419,533.434)		87.208	13.789	23.232	(484.194,530.658)	
711	513.498	26.008	(487.491,539.506)		92.152	14.571	24.550	(488.949,538.048)	
712	479.365	26.008	(453.357,505.372)		89.407	14.137	23.818	(455.547,503.183)	
713	507.059	26.008	(481.052,533.067)		108.700	17.187	28.958	(478.101,536.017)	
714	503.911	26.008	(477.904,529.919)		88.691	14.023	23.628	(480.284,527.539)	
715	481.683	26.008	(455.675,507.690)		98.410	15.560	26.216	(455.466,507.899)	
716	508.925	26.008	(482.917,534.932)		121.963	19.284	32.491	(476.434,541.416)	
717	485.579	26.008	(459.572,511.587)		88.439	13.983	23.560	(462.019,509.139)	
718	503.373	26.008	(477.365,529.381)		103.582	16.378	27.594	(475.779,530.967)	
719	505.337	26.008	(479.329,531.344)		91.865	14.525	24.473	(480.864,529.810)	
720	518.028	26.008	(492.021,544.036)		85.137	13.461	22.681	(495.348,540.709)	
721	494.250	26.008	(468.243,520.258)		70.046	11.075	18.660	(475.590,512.911)	
722	507.638	26.008	(481.631,533.646)		89.295	14.119	23.788	(483.850,531.427)	
723	505.119	26.008	(479.112,531.127)		114.626	18.124	30.537	(474.582,535.656)	
724	505.843	26.008	(479.835,531.850)		104.674	16.550	27.885	(477.958,533.728)	
725	501.724	26.008	(475.717,527.732)		86.366	13.656	23.008	(478.716,524.732)	
726	498.260	26.008	(472.253,524.268)		100.068	15.822	26.658	(471.602,524.918)	
727	493.872	26.008	(467.865,519.880)		79.115	12.509	21.076	(472.796,514.949)	
728	496.457	26.008	(470.449,522.464)		123.781	19.571	32.975	(463.481,529.432)	
729	497.377	26.008	(471.370,523.385)		74.991	11.857	19.978	(477.399,517.355)	
730	483.845	26.008	(457.837,509.853)		98.270	15.538	26.179	(457.666,510.024)	
731	477.997	26.008	(451.990,504.005)		120.320	19.024	32.053	(445.944,510.051)	
732	478.498	26.008	(452.491,504.506)		93.499	14.783	24.908	(453.590,503.406)	
733	511.815	26.008	(485.807,537.822)		81.376	12.867	21.679	(490.136,533.494)	

734	501.142	26.008	(475.134,527.149)		69.732	11.026	18.577	(482.565,519.718)	
735	505.750	26.008	(479.743,531.758)		90.173	14.258	24.022	(481.728,529.773)	
736	496.893	26.008	(470.885,522.900)		110.062	17.402	29.321	(467.572,526.213)	
737	532.198	26.008	(506.191,558.206)	FAIL	85.516	13.521	22.782	(509.416,554.980)	FAIL
738	492.710	26.008	(466.702,518.717)		101.193	16.000	26.958	(465.752,519.668)	
739	490.876	26.008	(464.869,516.884)		80.624	12.748	21.478	(469.398,512.355)	
740	530.067	26.008	(504.059,556.074)	FAIL	103.252	16.326	27.507	(502.560,557.573)	FAIL
741	485.049	26.008	(459.041,511.056)		95.020	15.024	25.314	(459.735,510.362)	
742	506.044	26.008	(480.036,532.051)		91.006	14.389	24.244	(481.800,530.288)	
743	529.746	26.008	(503.739,555.754)	FAIL	90.830	14.362	24.197	(505.549,553.943)	FAIL
744	507.503	26.008	(481.495,533.510)		81.655	12.911	21.753	(485.750,529.256)	
745	495.373	26.008	(469.365,521.380)		101.803	16.096	27.120	(468.252,522.493)	
746	505.763	26.008	(479.756,531.771)		77.440	12.244	20.630	(485.133,526.393)	
747	473.057	26.008	(447.050,499.065)	FAIL	81.907	12.951	21.820	(451.237,494.877)	FAIL
748	499.845	26.008	(473.838,525.853)		98.814	15.624	26.324	(473.521,526.169)	
749	480.376	26.008	(454.369,506.384)		93.367	14.763	24.873	(455.503,505.249)	
750	540.281	26.008	(514.274,566.289)	FAIL	118.811	18.786	31.651	(508.630,571.933)	FAIL
751	521.883	26.008	(495.875,547.890)		89.756	14.192	23.911	(497.972,545.794)	
752	524.301	26.008	(498.293,550.308)		104.845	16.577	27.931	(496.370,552.232)	
753	524.517	26.008	(498.510,550.525)		84.917	13.427	22.622	(501.895,547.139)	FAIL
754	522.383	26.008	(496.375,548.390)		106.023	16.764	28.245	(494.138,550.627)	
755	494.772	26.008	(468.764,520.779)		105.136	16.623	28.008	(466.764,522.780)	
756	500.172	26.008	(474.164,526.179)		100.663	15.916	26.817	(473.355,526.988)	
757	484.506	26.008	(458.498,510.513)		100.333	15.864	26.729	(457.777,511.234)	
758	467.890	26.008	(441.883,493.898)	FAIL	106.703	16.871	28.426	(439.465,496.316)	FAIL
759	533.440	26.008	(507.433,559.448)	FAIL	101.553	16.057	27.054	(506.386,560.494)	FAIL
760	515.546	26.008	(489.539,541.554)		94.592	14.956	25.199	(490.347,540.746)	
761	490.585	26.008	(464.577,516.592)		108.096	17.092	28.797	(461.788,519.382)	
762	492.322	26.008	(466.315,518.330)		112.982	17.864	30.098	(462.224,522.421)	
763	496.821	26.008	(470.813,522.828)		95.036	15.027	25.318	(471.503,522.139)	
764	493.720	26.008	(467.712,519.727)		68.665	10.857	18.292	(475.427,512.012)	
765	510.700	26.008	(484.693,536.708)		99.147	15.677	26.413	(484.287,537.113)	
766	513.108	26.008	(487.101,539.116)		90.053	14.239	23.990	(489.118,537.098)	
767	497.425	26.008	(471.418,523.433)		90.507	14.310	24.111	(473.314,521.536)	
768	515.880	26.008	(489.872,541.887)		110.416	17.458	29.415	(486.465,545.295)	
769	487.634	26.008	(461.626,513.641)		75.841	11.991	20.204	(467.430,507.838)	
770	489.195	26.008	(463.188,515.203)		111.221	17.586	29.629	(459.566,518.825)	
771	502.930	26.008	(476.922,528.937)		112.400	17.772	29.944	(472.986,532.874)	
772	493.947	26.008	(467.940,519.955)		110.607	17.488	29.466	(464.481,523.413)	
773	493.997	26.008	(467.989,520.005)		99.569	15.743	26.525	(467.472,520.522)	
774	522.746	26.008	(496.738,548.753)		103.418	16.352	27.551	(495.195,550.296)	
775	507.442	26.008	(481.435,533.450)		110.187	17.422	29.354	(478.088,536.796)	
776	496.262	26.008	(470.255,522.270)		83.327	13.175	22.198	(474.064,518.461)	

777	508.311	26.008	(482.304,534.319)		116.988	18.497	31.166	(477.146,539.477)	
778	499.035	26.008	(473.027,525.042)		112.342	17.763	29.928	(469.107,528.963)	
779	480.501	26.008	(454.493,506.508)		104.565	16.533	27.856	(452.644,508.357)	
780	496.107	26.008	(470.100,522.115)		139.558	22.066	37.178	(458.929,533.286)	
781	510.804	26.008	(484.796,536.811)		99.341	15.707	26.465	(484.339,537.268)	
782	486.831	26.008	(460.824,512.839)		73.118	11.561	19.479	(467.353,506.310)	
783	489.696	26.008	(463.688,515.703)		93.667	14.810	24.953	(464.743,514.649)	
784	507.053	26.008	(481.045,533.060)		108.653	17.180	28.945	(478.107,535.998)	
785	515.830	26.008	(489.823,541.838)		99.862	15.790	26.603	(489.227,542.434)	
786	507.416	26.008	(481.408,533.423)		103.356	16.342	27.534	(479.882,534.950)	
787	506.112	26.008	(480.105,532.120)		82.746	13.083	22.044	(484.069,528.156)	
788	503.260	26.008	(477.252,529.267)		99.338	15.707	26.464	(476.796,529.724)	
789	500.745	26.008	(474.737,526.752)		111.199	17.582	29.624	(471.121,530.369)	
790	486.238	26.008	(460.230,512.245)		107.110	16.936	28.534	(457.704,514.772)	
791	495.633	26.008	(469.625,521.640)		128.063	20.249	34.116	(461.517,529.749)	
792	511.705	26.008	(485.698,537.713)		103.518	16.368	27.577	(484.128,539.283)	
793	478.766	26.008	(452.758,504.773)		94.569	14.953	25.193	(453.573,503.959)	
794	503.504	26.008	(477.497,529.512)		120.150	18.997	32.008	(471.496,535.513)	
795	473.700	26.008	(447.692,499.707)	FAIL	98.643	15.597	26.279	(447.421,499.979)	FAIL
796	519.851	26.008	(493.844,545.859)		90.094	14.245	24.001	(495.850,543.852)	
797	490.447	26.008	(464.439,516.454)		94.926	15.009	25.288	(465.158,515.735)	
798	505.391	26.008	(479.384,531.399)		104.636	16.544	27.875	(477.516,533.266)	
799	507.812	26.008	(481.804,533.819)		102.260	16.169	27.242	(480.570,535.054)	
800	480.756	26.008	(454.749,506.764)		83.349	13.179	22.204	(458.552,502.961)	
801	483.929	26.008	(457.922,509.937)		104.566	16.533	27.857	(456.073,511.786)	
802	498.593	26.008	(472.586,524.601)		109.148	17.258	29.077	(469.516,527.671)	
803	492.662	26.008	(466.655,518.670)		122.692	19.399	32.685	(459.977,525.348)	
804	488.298	26.008	(462.291,514.306)		105.045	16.609	27.984	(460.314,516.282)	
805	522.542	26.008	(496.535,548.550)		85.265	13.482	22.715	(499.828,545.257)	
806	487.749	26.008	(461.741,513.756)		80.921	12.795	21.557	(466.191,509.306)	
807	513.741	26.008	(487.734,539.749)		123.585	19.541	32.923	(480.818,546.665)	
808	514.834	26.008	(488.826,540.841)		102.992	16.285	27.437	(487.396,542.271)	
809	496.512	26.008	(470.505,522.520)		79.502	12.570	21.179	(475.333,517.692)	
810	492.620	26.008	(466.613,518.628)		110.815	17.521	29.521	(463.099,522.142)	
811	489.479	26.008	(463.471,515.486)		102.368	16.186	27.271	(462.208,516.750)	
812	499.618	26.008	(473.611,525.626)		102.506	16.208	27.308	(472.311,526.926)	
813	509.741	26.008	(483.733,535.748)		103.143	16.308	27.477	(482.264,537.218)	
814	520.055	26.008	(494.047,546.062)		109.440	17.304	29.155	(490.900,549.209)	
815	521.919	26.008	(495.911,547.926)		91.674	14.495	24.422	(497.497,546.341)	
816	521.051	26.008	(495.043,547.058)		95.444	15.091	25.426	(495.624,546.477)	
817	494.552	26.008	(468.545,520.560)		117.613	18.596	31.332	(463.220,525.885)	
818	520.302	26.008	(494.294,546.309)		90.316	14.280	24.060	(496.242,544.362)	
819	501.051	26.008	(475.043,527.058)		119.682	18.923	31.883	(469.168,532.934)	

820	499.157	26.008	(473.149,525.164)		102.731	16.243	27.368	(471.789,526.524)	
821	524.090	26.008	(498.083,550.098)		86.592	13.691	23.068	(501.022,547.158)	FAIL
822	517.900	26.008	(491.892,543.907)		82.479	13.041	21.972	(495.927,539.872)	
823	524.211	26.008	(498.203,550.218)		90.950	14.380	24.229	(499.981,548.440)	
824	471.174	26.008	(445.166,497.181)	FAIL	107.078	16.930	28.526	(442.648,499.699)	FAIL
825	487.043	26.008	(461.036,513.051)		86.346	13.652	23.003	(464.041,510.046)	
826	494.641	26.008	(468.633,520.648)		118.272	18.700	31.508	(463.133,526.148)	
827	490.747	26.008	(464.739,516.754)		117.279	18.543	31.243	(459.503,521.990)	
828	465.460	26.008	(439.453,491.468)	FAIL	93.275	14.748	24.849	(440.612,490.309)	FAIL
829	492.437	26.008	(466.430,518.445)		104.036	16.449	27.715	(464.722,520.153)	
830	506.175	26.008	(480.167,532.182)		112.557	17.797	29.985	(476.189,536.160)	
831	493.278	26.008	(467.270,519.285)		126.573	20.013	33.719	(459.559,526.997)	
832	495.528	26.008	(469.521,521.536)		90.246	14.269	24.042	(471.486,519.570)	
833	497.356	26.008	(471.349,523.364)		88.895	14.056	23.682	(473.675,521.038)	
834	481.952	26.008	(455.945,507.960)		90.436	14.299	24.092	(457.860,506.044)	
835	511.974	26.008	(485.966,537.981)		92.881	14.686	24.744	(487.230,536.717)	
836	507.789	26.008	(481.781,533.796)		118.310	18.706	31.518	(476.271,539.307)	
837	462.520	26.008	(436.512,488.527)	FAIL	109.598	17.329	29.197	(433.323,491.717)	FAIL
838	499.779	26.008	(473.771,525.786)		100.308	15.860	26.722	(473.057,526.501)	
839	487.578	26.008	(461.571,513.586)		88.677	14.021	23.624	(463.955,511.202)	
840	494.699	26.008	(468.691,520.706)		105.491	16.680	28.103	(466.596,522.802)	
841	511.984	26.008	(485.976,537.991)		102.643	16.229	27.344	(484.640,539.328)	
842	505.921	26.008	(479.914,531.929)		82.539	13.051	21.988	(483.933,527.909)	
843	479.087	26.008	(453.079,505.094)		90.431	14.298	24.091	(454.996,503.178)	
844	502.796	26.008	(476.789,528.804)		105.997	16.760	28.238	(474.559,531.034)	
845	458.988	26.008	(432.981,484.996)	FAIL	75.855	11.994	20.208	(438.781,479.196)	FAIL
846	481.179	26.008	(455.171,507.187)		89.822	14.202	23.929	(457.250,505.108)	
847	469.277	26.008	(443.270,495.285)	FAIL	98.194	15.526	26.159	(443.118,495.436)	FAIL
848	483.326	26.008	(457.318,509.333)		98.252	15.535	26.174	(457.151,509.500)	
849	492.155	26.008	(466.147,518.162)		89.078	14.084	23.730	(468.425,515.885)	
850	487.022	26.008	(461.015,513.030)		107.398	16.981	28.611	(458.411,515.633)	
851	488.389	26.008	(462.381,514.396)		87.382	13.816	23.279	(465.110,511.667)	
852	520.877	26.008	(494.870,546.885)		110.783	17.516	29.513	(491.365,550.390)	
853	477.217	26.008	(451.210,503.225)		114.504	18.105	30.504	(446.713,507.721)	
854	507.837	26.008	(481.830,533.845)		101.527	16.053	27.047	(480.790,534.884)	
855	525.391	26.008	(499.383,551.398)		96.559	15.267	25.723	(499.668,551.114)	
856	477.056	26.008	(451.048,503.063)		120.451	19.045	32.088	(444.967,509.144)	
857	490.010	26.008	(464.003,516.018)		106.890	16.901	28.476	(461.534,518.486)	
858	483.299	26.008	(457.292,509.307)		87.940	13.905	23.427	(459.872,506.727)	
859	479.055	26.008	(453.048,505.063)		83.384	13.184	22.214	(456.842,501.269)	
860	499.292	26.008	(473.284,525.299)		94.882	15.002	25.277	(474.015,524.568)	
861	494.947	26.008	(468.940,520.955)		94.275	14.906	25.115	(469.832,520.062)	
862	505.502	26.008	(479.494,531.509)		99.417	15.719	26.485	(479.017,531.986)	

863	506.834	26.008	(480.827,532.842)		96.521	15.261	25.713	(481.121,532.548)	
864	465.134	26.008	(439.126,491.141)	FAIL	86.858	13.733	23.139	(441.995,488.273)	FAIL
865	484.896	26.008	(458.888,510.903)		103.421	16.352	27.552	(457.344,512.448)	
866	501.927	26.008	(475.920,527.935)		106.483	16.836	28.367	(473.560,530.294)	
867	528.870	26.008	(502.863,554.878)	FAIL	83.426	13.191	22.225	(506.645,551.095)	FAIL
868	505.258	26.008	(479.250,531.266)		112.841	17.842	30.061	(475.197,535.319)	
869	493.073	26.008	(467.066,519.081)		99.776	15.776	26.581	(466.493,519.654)	
870	505.877	26.008	(479.869,531.884)		104.696	16.554	27.891	(477.986,533.768)	
871	479.061	26.008	(453.053,505.068)		96.575	15.270	25.728	(453.333,504.789)	
872	470.459	26.008	(444.451,496.466)	FAIL	116.211	18.375	30.959	(439.500,501.417)	
873	517.453	26.008	(491.445,543.460)		101.836	16.102	27.129	(490.324,544.582)	
874	492.011	26.008	(466.003,518.018)		105.751	16.721	28.172	(463.839,520.183)	
875	505.203	26.008	(479.195,531.210)		127.463	20.154	33.956	(471.247,539.159)	
876	470.007	26.008	(443.999,496.015)	FAIL	121.709	19.244	32.424	(437.583,502.431)	
877	488.624	26.008	(462.616,514.632)		104.448	16.515	27.825	(460.799,516.449)	
878	466.353	26.008	(440.345,492.360)	FAIL	105.728	16.717	28.166	(438.187,494.519)	FAIL
879	497.112	26.008	(471.105,523.120)		92.827	14.677	24.729	(472.383,521.842)	
880	509.567	26.008	(483.560,535.575)		99.978	15.808	26.634	(482.933,536.202)	
881	531.984	26.008	(505.977,557.992)	FAIL	107.246	16.957	28.570	(503.414,560.555)	FAIL
882	485.452	26.008	(459.444,511.459)		94.587	14.955	25.198	(460.254,510.650)	
883	501.389	26.008	(475.381,527.396)		89.927	14.219	23.957	(477.432,525.345)	
884	492.938	26.008	(466.930,518.945)		83.324	13.175	22.198	(470.740,515.135)	
885	501.644	26.008	(475.636,527.651)		119.231	18.852	31.763	(469.880,533.407)	
886	523.930	26.008	(497.923,549.938)		97.048	15.345	25.854	(498.076,549.784)	
887	523.358	26.008	(497.351,549.366)		104.375	16.503	27.806	(495.552,551.164)	
888	498.145	26.008	(472.138,524.153)		115.936	18.331	30.885	(467.260,529.031)	
889	512.017	26.008	(486.009,538.024)		109.510	17.315	29.174	(482.843,541.190)	
890	485.316	26.008	(459.308,511.323)		95.389	15.082	25.412	(459.904,510.728)	
891	503.123	26.008	(477.116,529.131)		106.378	16.820	28.339	(474.784,531.463)	
892	517.315	26.008	(491.308,543.323)		99.921	15.799	26.619	(490.696,543.934)	
893	495.629	26.008	(469.621,521.636)		96.174	15.206	25.621	(470.008,521.250)	
894	478.838	26.008	(452.831,504.846)		110.281	17.437	29.379	(449.460,508.217)	
895	513.826	26.008	(487.818,539.833)		94.075	14.875	25.062	(488.764,538.888)	
896	493.429	26.008	(467.422,519.437)		117.994	18.656	31.434	(461.996,524.863)	
897	500.132	26.008	(474.124,526.139)		99.921	15.799	26.619	(473.513,526.751)	
898	502.350	26.008	(476.342,528.357)		110.428	17.460	29.418	(472.931,531.768)	
899	534.565	26.008	(508.558,560.573)	FAIL	101.720	16.083	27.098	(507.467,561.664)	FAIL
900	485.144	26.008	(459.137,511.152)		103.581	16.378	27.594	(457.550,512.739)	
901	526.784	26.008	(500.776,552.791)	FAIL	109.192	17.265	29.089	(497.695,555.872)	
902	510.739	26.008	(484.732,536.747)		92.292	14.593	24.587	(486.152,535.326)	
903	517.281	26.008	(491.274,543.289)		97.975	15.491	26.101	(491.180,543.382)	
904	515.827	26.008	(489.820,541.835)		81.488	12.884	21.709	(494.119,537.536)	
905	511.392	26.008	(485.385,537.400)		93.920	14.850	25.020	(486.372,536.412)	

906	516.765	26.008	(490.758,542.773)		98.997	15.653	26.373	(490.392,543.138)	
907	483.237	26.008	(457.230,509.245)		120.085	18.987	31.991	(451.246,515.228)	
908	517.475	26.008	(491.467,543.482)		110.215	17.427	29.361	(488.113,546.836)	
909	507.667	26.008	(481.659,533.674)		113.963	18.019	30.360	(477.307,538.027)	
910	479.437	26.008	(453.430,505.445)		104.812	16.572	27.922	(451.515,507.359)	
911	496.586	26.008	(470.578,522.593)		116.632	18.441	31.071	(465.515,527.657)	
912	493.061	26.008	(467.053,519.069)		97.684	15.445	26.023	(467.038,519.084)	
913	487.489	26.008	(461.482,513.497)		107.393	16.980	28.610	(458.880,516.099)	
914	475.796	26.008	(449.789,501.804)		100.548	15.898	26.786	(449.010,502.582)	
915	484.331	26.008	(458.323,510.338)		99.742	15.771	26.572	(457.759,510.902)	
916	503.957	26.008	(477.949,529.964)		93.186	14.734	24.825	(479.132,528.782)	
917	489.181	26.008	(463.173,515.188)		87.628	13.855	23.344	(465.837,512.525)	
918	490.579	26.008	(464.572,516.587)		106.493	16.838	28.370	(462.210,518.949)	
919	475.979	26.008	(449.971,501.986)		79.811	12.619	21.262	(454.717,497.241)	FAIL
920	493.306	26.008	(467.298,519.313)		66.576	10.527	17.736	(475.570,511.041)	
921	519.978	26.008	(493.970,545.986)		102.835	16.260	27.395	(492.583,547.373)	
922	507.992	26.008	(481.985,534.000)		87.345	13.811	23.269	(484.723,531.261)	
923	495.590	26.008	(469.583,521.598)		81.827	12.938	21.799	(473.791,517.389)	
924	502.468	26.008	(476.461,528.476)		89.307	14.121	23.792	(478.677,526.260)	
925	509.911	26.008	(483.903,535.918)		119.467	18.889	31.826	(478.085,541.737)	
926	518.915	26.008	(492.907,544.922)		89.812	14.201	23.926	(494.989,542.841)	
927	511.883	26.008	(485.875,537.890)		118.914	18.802	31.679	(480.204,543.562)	
928	526.086	26.008	(500.078,552.093)	FAIL	84.098	13.297	22.404	(503.682,548.489)	FAIL
929	516.938	26.008	(490.931,542.946)		119.950	18.966	31.955	(484.983,548.893)	
930	490.912	26.008	(464.904,516.919)		104.142	16.466	27.744	(463.168,518.655)	
931	519.170	26.008	(493.162,545.177)		94.838	14.995	25.265	(493.905,544.435)	
932	499.482	26.008	(473.475,525.490)		100.067	15.822	26.658	(472.824,526.140)	
933	498.206	26.008	(472.198,524.213)		132.103	20.887	35.192	(463.014,533.398)	
934	496.533	26.008	(470.526,522.541)		125.960	19.916	33.556	(462.977,530.089)	
935	490.512	26.008	(464.505,516.520)		92.503	14.626	24.643	(465.869,515.155)	
936	508.817	26.008	(482.809,534.824)		108.253	17.116	28.839	(479.978,537.655)	
937	503.802	26.008	(477.795,529.810)		97.358	15.394	25.936	(477.866,529.739)	
938	493.407	26.008	(467.399,519.414)		117.629	18.599	31.336	(462.070,524.743)	
939	497.688	26.008	(471.681,523.696)		100.452	15.883	26.761	(470.927,524.449)	
940	510.499	26.008	(484.492,536.507)		92.821	14.676	24.728	(485.772,535.227)	
941	483.786	26.008	(457.778,509.793)		98.446	15.566	26.226	(457.559,510.012)	
942	502.375	26.008	(476.367,528.382)		104.958	16.595	27.961	(474.414,530.335)	
943	490.114	26.008	(464.107,516.122)		113.666	17.972	30.281	(459.833,520.395)	
944	508.528	26.008	(482.520,534.535)		91.751	14.507	24.443	(484.085,532.971)	
945	503.980	26.008	(477.973,529.988)		115.287	18.229	30.713	(473.267,534.693)	
946	499.480	26.008	(473.473,525.488)		90.874	14.368	24.209	(475.271,523.689)	
947	477.126	26.008	(451.118,503.133)		115.520	18.265	30.775	(446.351,507.900)	
948	509.957	26.008	(483.949,535.964)		114.812	18.153	30.586	(479.370,540.543)	

949	463.976	26.008	(437.968,489.983)	FAIL	91.740	14.505	24.440	(439.536,488.415)	FAIL
950	487.885	26.008	(461.877,513.892)		91.704	14.500	24.430	(463.455,512.315)	
951	488.503	26.008	(462.496,514.511)		71.540	11.312	19.058	(469.445,507.562)	
952	517.934	26.008	(491.927,543.942)		71.578	11.318	19.069	(498.866,537.003)	
953	498.503	26.008	(472.496,524.511)		88.702	14.025	23.630	(474.873,522.133)	
954	462.676	26.008	(436.669,488.684)	FAIL	97.257	15.378	25.909	(436.767,488.586)	FAIL
955	508.202	26.008	(482.195,534.210)		104.942	16.593	27.957	(480.246,536.159)	
956	465.793	26.008	(439.785,491.800)	FAIL	82.943	13.114	22.096	(443.697,487.889)	FAIL
957	464.934	26.008	(438.926,490.941)	FAIL	100.079	15.824	26.661	(438.273,491.595)	FAIL
958	483.107	26.008	(457.100,509.115)		112.600	17.804	29.997	(453.110,513.104)	
959	467.469	26.008	(441.462,493.477)	FAIL	106.399	16.823	28.345	(439.124,495.814)	FAIL
960	546.436	26.008	(520.429,572.444)	FAIL	92.165	14.573	24.553	(521.883,570.989)	FAIL
961	492.518	26.008	(466.510,518.525)		119.408	18.880	31.811	(460.707,524.328)	
962	512.097	26.008	(486.089,538.104)		118.024	18.661	31.442	(480.655,543.538)	
963	519.483	26.008	(493.475,545.490)		109.243	17.273	29.103	(490.380,548.585)	
964	493.223	26.008	(467.216,519.231)		91.368	14.447	24.341	(468.883,517.564)	
965	502.206	26.008	(476.198,528.213)		104.761	16.564	27.908	(474.297,530.114)	
966	494.307	26.008	(468.299,520.314)		110.608	17.489	29.466	(464.841,523.773)	
967	492.104	26.008	(466.097,518.112)		78.418	12.399	20.891	(471.214,512.995)	
968	492.771	26.008	(466.764,518.779)		84.683	13.390	22.560	(470.211,515.331)	
969	495.892	26.008	(469.885,521.900)		85.867	13.577	22.875	(473.017,518.767)	
970	472.328	26.008	(446.320,498.335)	FAIL	82.366	13.023	21.943	(450.385,494.270)	FAIL
971	490.212	26.008	(464.204,516.219)		107.955	17.069	28.759	(461.452,518.971)	
972	489.670	26.008	(463.662,515.677)		92.120	14.565	24.541	(465.129,514.211)	
973	490.611	26.008	(464.603,516.618)		77.751	12.294	20.713	(469.898,511.324)	
974	488.535	26.008	(462.527,514.542)		88.767	14.035	23.648	(464.887,512.182)	
975	507.877	26.008	(481.870,533.885)		103.246	16.325	27.505	(480.373,535.382)	
976	495.967	26.008	(469.959,521.974)		95.488	15.098	25.438	(470.529,521.405)	
977	523.413	26.008	(497.405,549.420)		98.900	15.637	26.347	(497.066,549.760)	
978	507.770	26.008	(481.762,533.777)		95.026	15.025	25.315	(482.455,533.085)	
979	499.428	26.008	(473.420,525.435)		102.309	16.176	27.255	(472.172,526.683)	
980	515.879	26.008	(489.871,541.886)		102.172	16.155	27.219	(488.660,543.098)	
981	512.210	26.008	(486.202,538.217)		112.655	17.812	30.011	(482.198,542.221)	
982	495.607	26.008	(469.600,521.615)		104.444	16.514	27.824	(467.783,523.431)	
983	506.607	26.008	(480.600,532.615)		92.262	14.588	24.579	(482.029,531.186)	
984	509.084	26.008	(483.076,535.091)		107.263	16.960	28.575	(480.509,537.659)	
985	483.217	26.008	(457.210,509.225)		94.772	14.985	25.247	(457.970,508.465)	
986	489.560	26.008	(463.552,515.567)		85.925	13.586	22.891	(466.669,512.450)	
987	511.845	26.008	(485.838,537.853)		84.918	13.427	22.622	(489.223,534.467)	
988	478.307	26.008	(452.300,504.315)		103.486	16.363	27.569	(450.738,505.876)	
989	512.095	26.008	(486.087,538.102)		108.012	17.078	28.775	(483.320,540.869)	
990	486.597	26.008	(460.589,512.604)		90.368	14.288	24.074	(462.523,510.671)	
991	481.469	26.008	(455.462,507.477)		92.798	14.673	24.721	(456.748,506.191)	

992	510.790	26.008	(484.782,536.797)		98.311	15.544	26.190	(484.600,536.980)	
993	495.135	26.008	(469.128,521.143)		97.627	15.436	26.008	(469.127,521.143)	
994	498.735	26.008	(472.728,524.743)		62.466	9.877	16.641	(482.094,515.376)	
995	491.379	26.008	(465.371,517.386)		97.445	15.407	25.959	(465.419,517.338)	
996	506.393	26.008	(480.385,532.400)		104.206	16.476	27.761	(478.632,534.154)	
997	514.999	26.008	(488.992,541.007)		93.251	14.744	24.842	(490.157,539.841)	
998	535.021	26.008	(509.013,561.028)	FAIL	115.413	18.248	30.746	(504.275,565.767)	FAIL
999	506.854	26.008	(480.847,532.862)		94.255	14.903	25.110	(481.745,531.964)	

Number of failures for known standard deviations = 94.

Number of failures for unknown standard deviations = 91.

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