The CONTENTS Procedure

Data Set Name	P1FOLDER.P1DATA	**Observations**	41
Member Type	DATA	**Variables**	8
Engine	V9	**Indexes**	0
Created	03/22/2020 18:00:13	**Observation Length**	72
Last Modified	03/22/2020 18:00:13	**Deleted Observations**	0
Protection		**Compressed**	NO
Data Set Type		**Sorted**	NO
Label			
Data Representation	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
Encoding	utf-8 Unicode (UTF-8)		

Engine/Host Dependent Information	
Data Set Page Size	65536
Number of Data Set Pages	1
First Data Page	1
Max Obs per Page	908
Obs in First Data Page	41
Number of Data Set Repairs	0
Filename	/folders/myfolders/Linear Models/Project/p1data.sas7bdat
Release Created	9.0401M6
Host Created	Linux
Inode Number	685
Access Permission	rwxrwx---
Owner Name	root
File Size	128KB
File Size (bytes)	131072

Alphabetic List of Variables and Attributes					
#	**Variable**	**Type**	**Len**	**Format**	**Informat**
1	City	Char	13	$13.	$13.
4	Man	Num	8	BEST12.	BEST32.
5	Pop	Num	8	BEST12.	BEST32.
7	Rain	Num	8	BEST12.	BEST32.
8	RainDays	Num	8	BEST12.	BEST32.
2	SO2	Num	8	BEST12.	BEST32.
3	Temp	Num	8	BEST12.	BEST32.
6	Wind	Num	8	BEST12.	BEST32.

Obs	City	SO2	Temp	Man	Pop	Wind	Rain	RainDays
1	Phoenix	10	70.3	213	582	6	7.05	36
2	Little Rock	13	61	91	132	8.2	48.52	100
3	San Francisco	12	56.7	453	716	8.7	20.66	67
4	Denver	17	51.9	454	515	9	12.95	86
5	Hartford	56	49.1	412	158	9	43.37	127
6	Wilmington	36	54	80	80	9	40.25	114
7	Washington	29	57.3	434	757	9.3	38.89	111
8	Jacksonville	14	68.4	136	529	8.8	54.47	116
9	Miami	10	75.5	207	335	9	59.8	128
10	Atlanta	24	61.5	368	497	9.1	48.34	115
11	Chicago	110	50.6	3344	3369	10.4	34.44	122
12	Indianapolis	28	52.3	361	746	9.7	38.74	121
13	Des Moines	17	49	104	201	11.2	30.85	103
14	Wichita	8	56.6	125	277	12.7	30.58	82
15	Louisville	30	55.6	291	593	8.3	43.11	123
16	New Orleans	9	68.3	204	361	8.4	56.77	113
17	Baltimore	47	55	625	905	9.6	41.31	111
18	Detroit	35	49.9	1064	1513	10.1	30.96	129
19	Minn-St. Paul	29	43.5	699	744	10.6	25.94	137
20	Kansas City	14	54.5	381	507	10	37	99
21	St. Louis	56	55.9	775	622	9.5	35.89	105
22	Omaha	14	51.5	181	347	10.9	30.18	98
23	Albuquerque	11	56.8	46	244	8.9	7.77	58
24	Albany	46	47.6	44	116	8.8	33.36	135
25	Buffalo	11	47.1	391	463	12.4	36.11	166
26	Cincinnati	23	54	462	453	7.1	39.04	132
27	Cleveland	65	49.7	1007	751	10.9	34.99	155
28	Columbus	26	51.5	266	540	8.6	37.01	134
29	Philadelphia	69	54.6	1692	1950	9.6	39.93	115
30	Pittsburgh	61	50.4	347	520	9.4	36.22	147
31	Providence	94	50	343	179	10.6	42.75	125
32	Memphis	10	61.6	337	624	9.2	49.1	105
33	Nashville	18	59.4	275	448	7.9	46	119
34	Dallas	9	66.2	641	844	10.9	35.94	78
35	Houston	10	68.9	721	1233	10.8	48.19	103
36	Salt Lake Cit	28	51	137	176	8.7	15.17	89
37	Norfolk	31	59.3	96	308	10.6	44.68	116
38	Richmond	26	57.8	197	299	7.6	42.59	115

Obs	City	SO2	Temp	Man	Pop	Wind	Rain	RainDays
39	Seattle	29	51.1	379	531	9.4	38.79	164
40	Charleston	31	55.2	35	71	6.5	40.75	148
41	Milwaukee	16	45.7	569	717	11.8	29.07	123

The MEANS Procedure

Variable	Lower Quartile	Median	Upper Quartile	Mean	Lower 95% CL for Mean	Upper 95% CL for Mean
SO2	13.0000000	26.0000000	35.0000000	30.0487805	22.6400172	37.4575438
Temp	50.6000000	54.6000000	59.3000000	55.7634146	53.4820660	58.0447633
Man	181.0000000	347.0000000	462.0000000	463.0975610	285.2432375	640.9518845
Pop	299.0000000	515.0000000	717.0000000	608.6097561	425.8191313	791.4003809
Wind	8.7000000	9.3000000	10.6000000	9.4439024	8.9929667	9.8948382
Rain	30.9600000	38.7400000	43.1100000	36.7690244	33.0534648	40.4845840
RainDays	103.0000000	115.0000000	128.0000000	113.9024390	105.5359809	122.2688972

The CORR Procedure

7 Variables:	SO2	Temp	Man	Pop	Wind	Rain	RainDays

Simple Statistics						
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
SO2	41	30.04878	23.47227	1232	8.00000	110.00000
Temp	41	55.76341	7.22772	2286	43.50000	75.50000
Man	41	463.09756	563.47395	18987	35.00000	3344
Pop	41	608.60976	579.11302	24953	71.00000	3369
Wind	41	9.44390	1.42864	387.20000	6.00000	12.70000
Rain	41	36.76902	11.77155	1508	7.05000	59.80000
RainDays	41	113.90244	26.50642	4670	36.00000	166.00000

Pearson Correlation Coefficients, N = 41 Prob > |r| under H0: Rho=0							
	SO2	Temp	Man	Pop	Wind	Rain	RainDays
SO2	1.00000	-0.43360 0.0046	0.64477 <.0001	0.49378 0.0010	0.09469 0.5559	0.05429 0.7360	0.36956 0.0174
Temp	-0.43360 0.0046	1.00000	-0.19004 0.2340	-0.06268 0.6970	-0.34974 0.0250	0.38625 0.0126	-0.43024 0.0050
Man	0.64477 <.0001	-0.19004 0.2340	1.00000	0.95527 <.0001	0.23795 0.1341	-0.03242 0.8405	0.13183 0.4113
Pop	0.49378 0.0010	-0.06268 0.6970	0.95527 <.0001	1.00000	0.21264 0.1819	-0.02612 0.8712	0.04208 0.7939
Wind	0.09469 0.5559	-0.34974 0.0250	0.23795 0.1341	0.21264 0.1819	1.00000	-0.01299 0.9357	0.16411 0.3052
Rain	0.05429 0.7360	0.38625 0.0126	-0.03242 0.8405	-0.02612 0.8712	-0.01299 0.9357	1.00000	0.49610 0.0010
RainDays	0.36956 0.0174	-0.43024 0.0050	0.13183 0.4113	0.04208 0.7939	0.16411 0.3052	0.49610 0.0010	1.00000

The UNIVARIATE Procedure
Variable: SO2

Moments			
N	41	**Sum Weights**	41
Mean	30.0487805	**Sum Observations**	1232
Std Deviation	23.4722722	**Variance**	550.947561
Skewness	1.70698288	**Kurtosis**	3.02028547
Uncorrected SS	59058	**Corrected SS**	22037.9024
Coeff Variation	78.1138928	**Std Error Mean**	3.66575305

Basic Statistical Measures			
Location		**Variability**	
Mean	30.04878	**Std Deviation**	23.47227
Median	26.00000	**Variance**	550.94756
Mode	10.00000	**Range**	102.00000
		Interquartile Range	22.00000

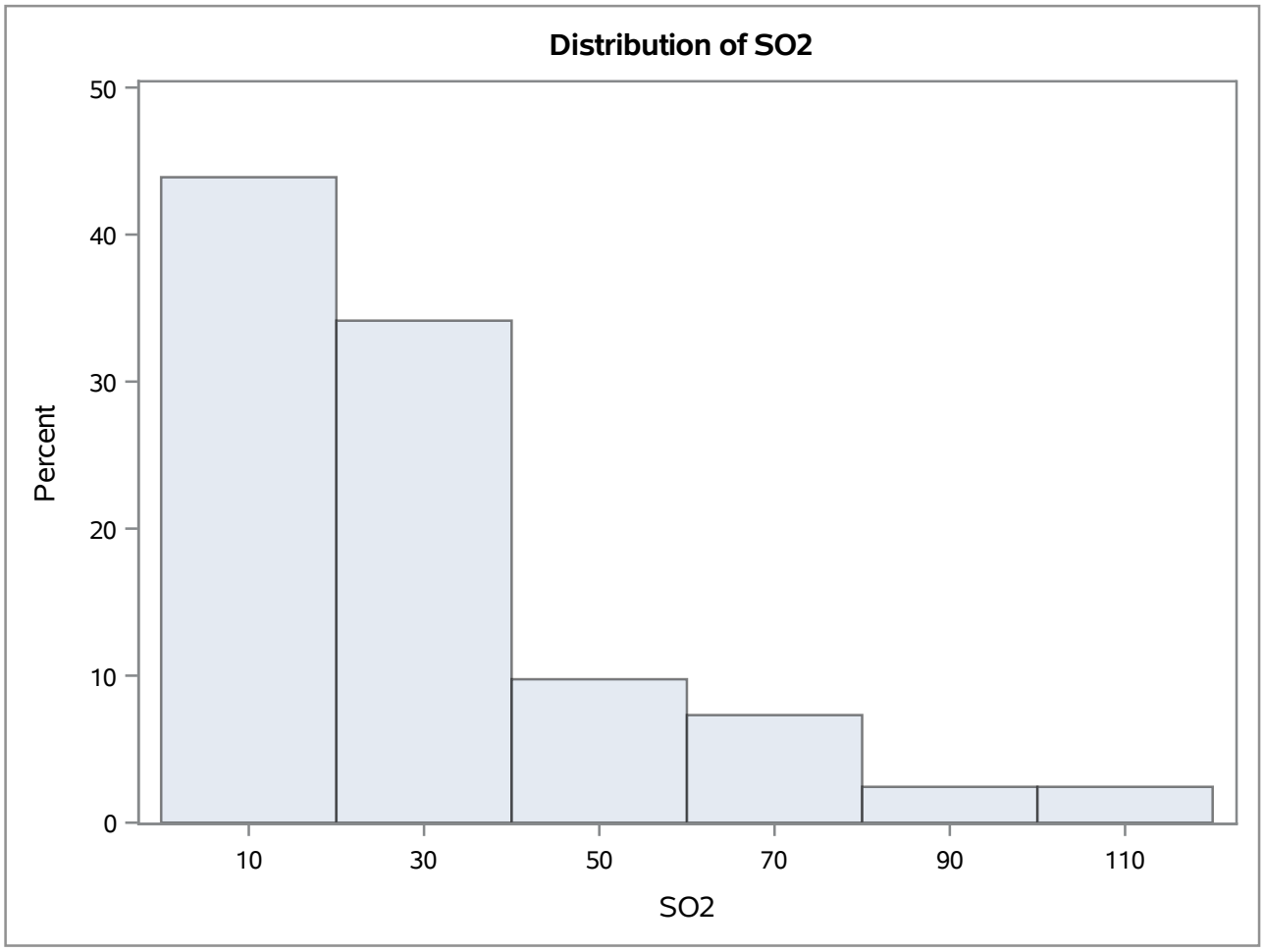
Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	8.197164	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	110
99%	110
95%	69
90%	61
75% Q3	35
50% Median	26
25% Q1	13
10%	10
5%	9
1%	8
0% Min	8

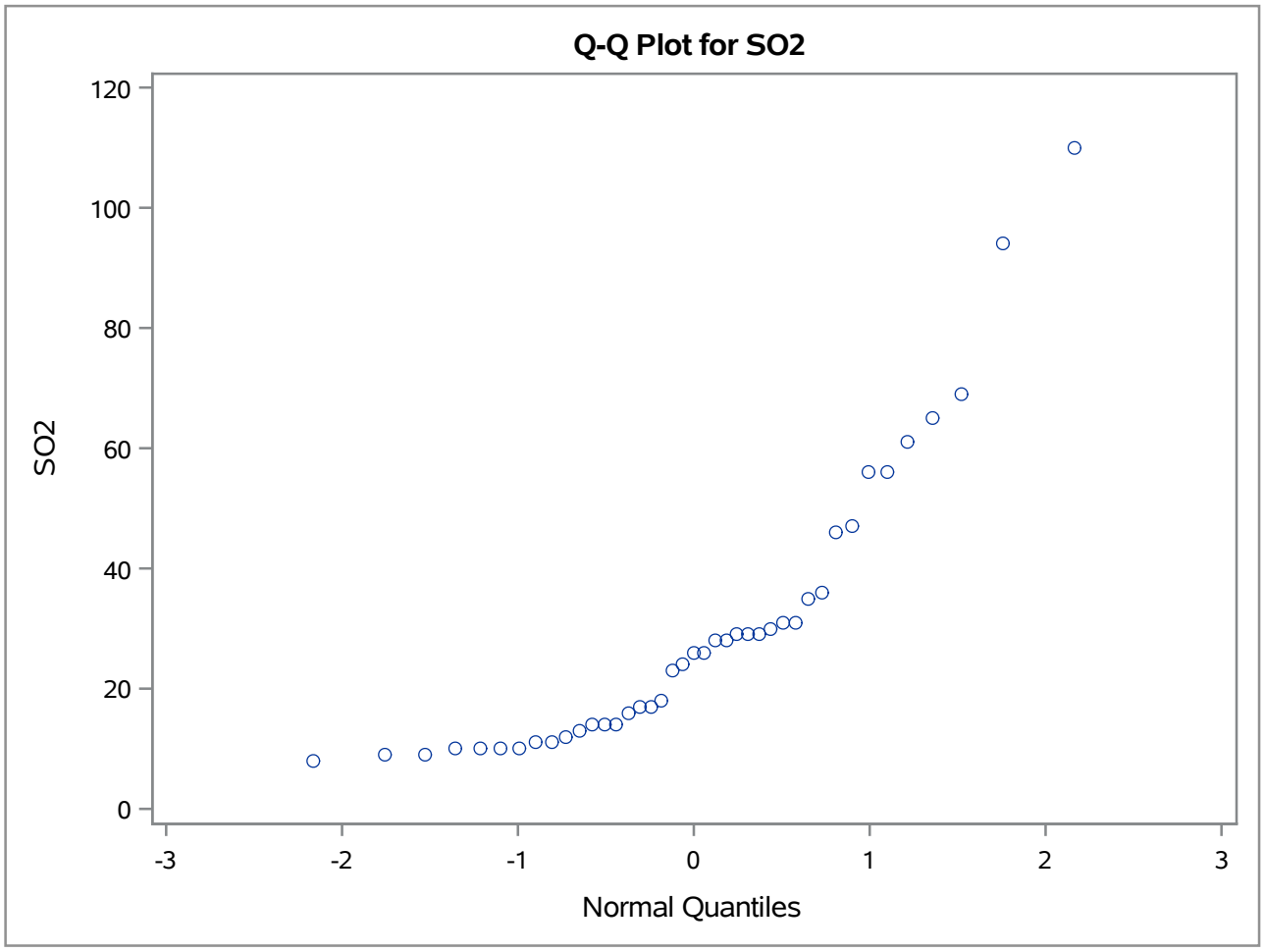
The UNIVARIATE Procedure
Variable: SO2

Extreme Observations					
Lowest			Highest		
Value	City	Obs	Value	City	Obs
8	Wichita	14	61	Pittsburgh	30
9	Dallas	34	65	Cleveland	27
9	New Orleans	16	69	Philadelphia	29
10	Houston	35	94	Providence	31
10	Memphis	32	110	Chicago	11

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Temp

Moments			
N	41	**Sum Weights**	41
Mean	55.7634146	**Sum Observations**	2286.3
Std Deviation	7.22771596	**Variance**	52.239878
Skewness	0.88680905	**Kurtosis**	0.44208501
Uncorrected SS	129581.49	**Corrected SS**	2089.59512
Coeff Variation	12.9613942	**Std Error Mean**	1.12877959

Basic Statistical Measures			
Location		**Variability**	
Mean	55.76341	**Std Deviation**	7.22772
Median	54.60000	**Variance**	52.23988
Mode	51.50000	**Range**	32.00000
		Interquartile Range	8.70000

Note: The mode displayed is the smallest of 2 modes with a count of 2.

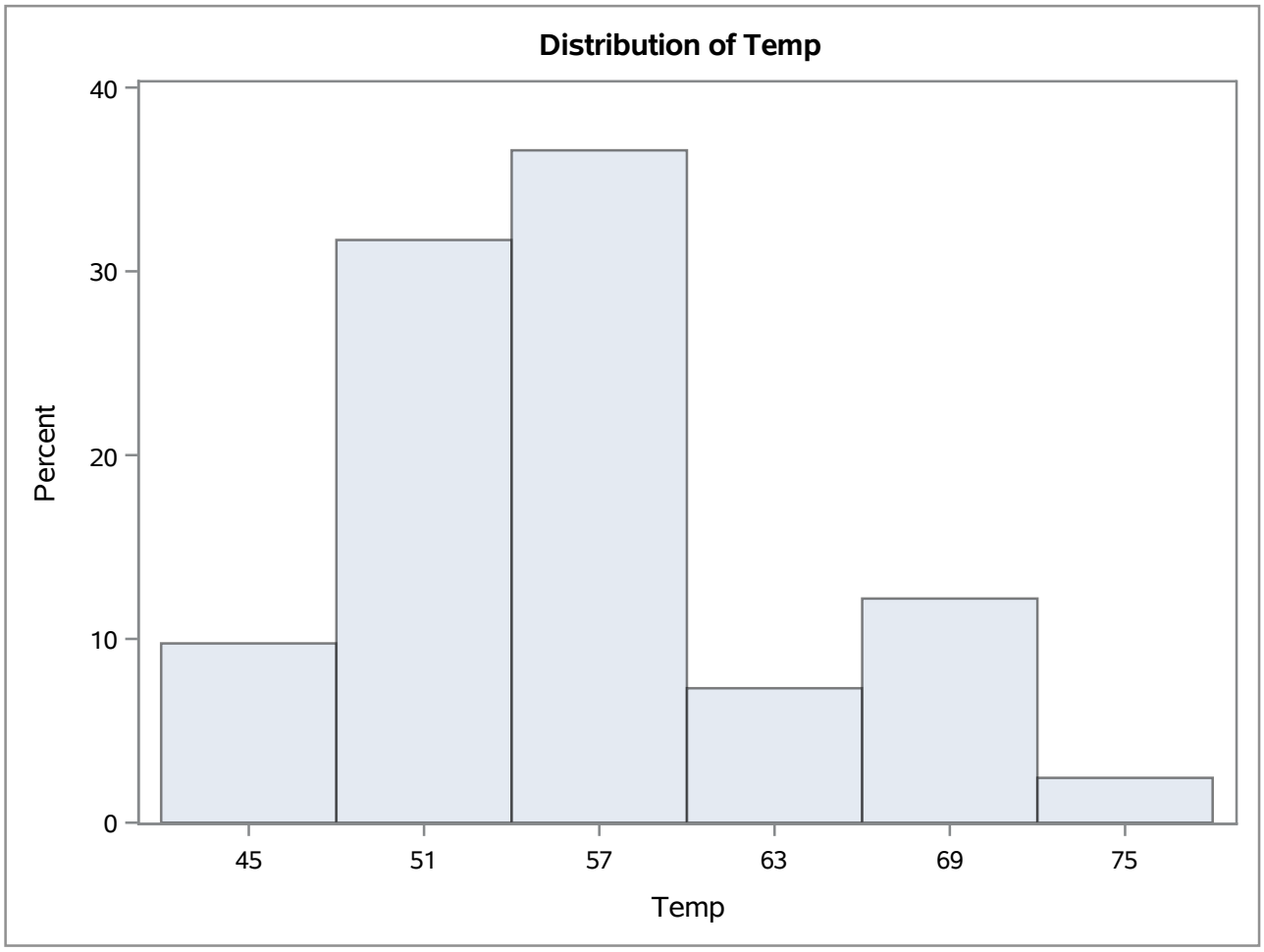
Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	49.40151	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	75.5
99%	75.5
95%	68.9
90%	68.3
75% Q3	59.3
50% Median	54.6
25% Q1	50.6
10%	49.0
5%	47.1
1%	43.5
0% Min	43.5

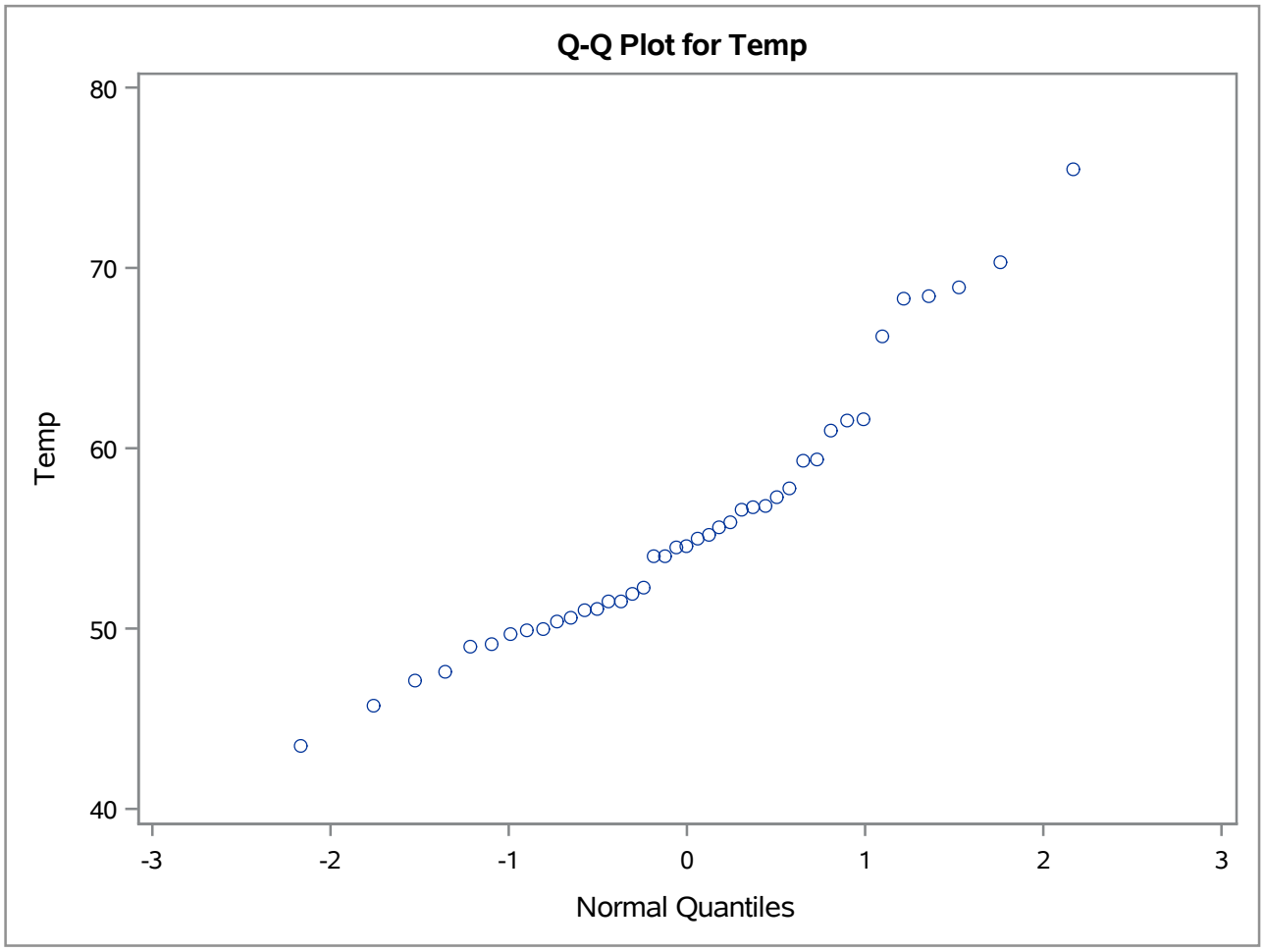
The UNIVARIATE Procedure
Variable: Temp

Extreme Observations					
Lowest			Highest		
Value	City	Obs	Value	City	Obs
43.5	Minn-St. Paul	19	68.3	New Orleans	16
45.7	Milwaukee	41	68.4	Jacksonville	8
47.1	Buffalo	25	68.9	Houston	35
47.6	Albany	24	70.3	Phoenix	1
49.0	Des Moines	13	75.5	Miami	9

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Man

Moments			
N	41	**Sum Weights**	41
Mean	463.097561	**Sum Observations**	18987
Std Deviation	563.473948	**Variance**	317502.89
Skewness	3.75488343	**Kurtosis**	17.403406
Uncorrected SS	21492949	**Corrected SS**	12700115.6
Coeff Variation	121.674998	**Std Error Mean**	87.9998462

Basic Statistical Measures			
Location		**Variability**	
Mean	463.0976	**Std Deviation**	563.47395
Median	347.0000	**Variance**	317503
Mode	.	**Range**	3309
		Interquartile Range	281.00000

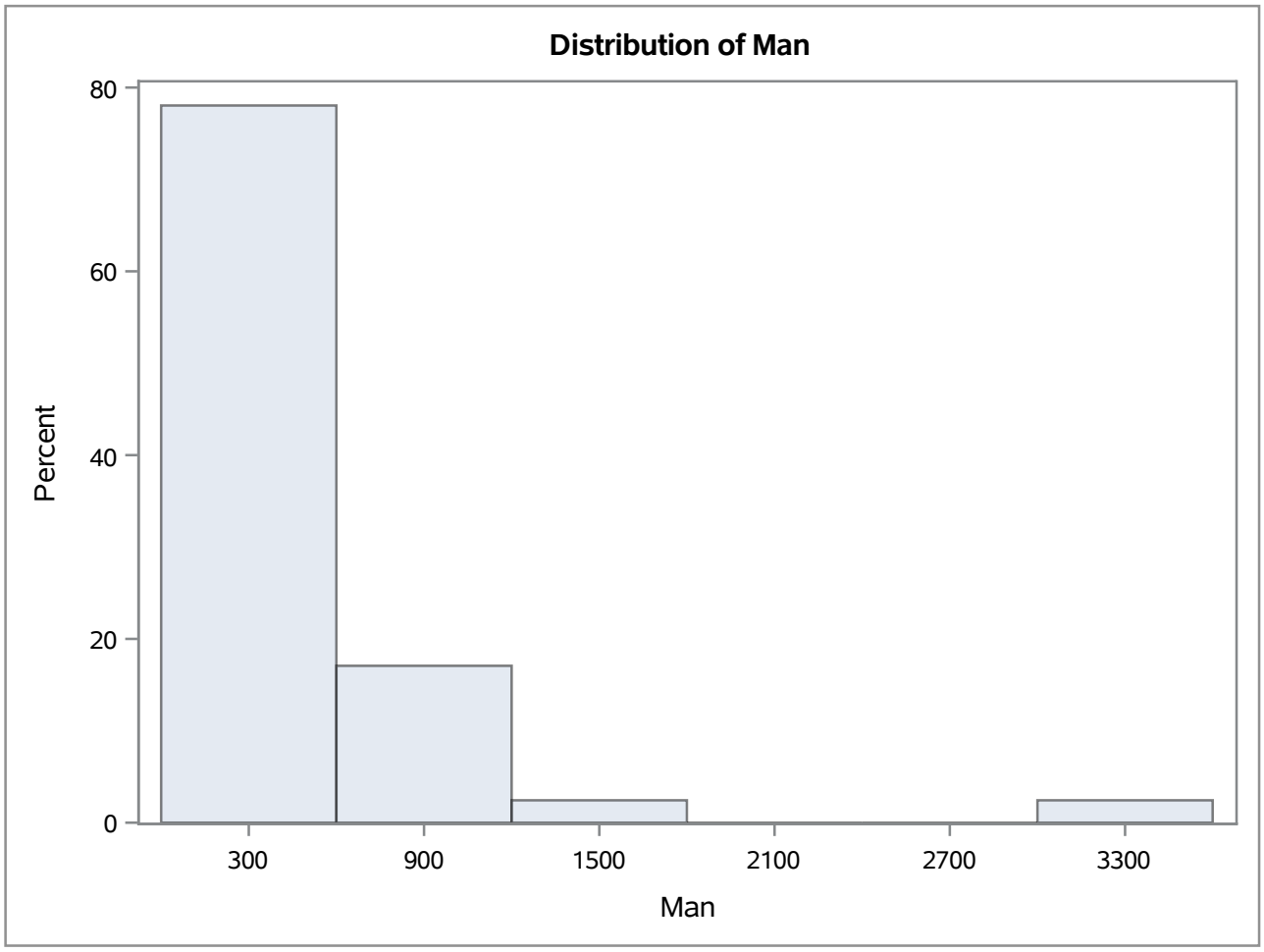
Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	5.262481	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	3344
99%	3344
95%	1064
90%	775
75% Q3	462
50% Median	347
25% Q1	181
10%	91
5%	46
1%	35
0% Min	35

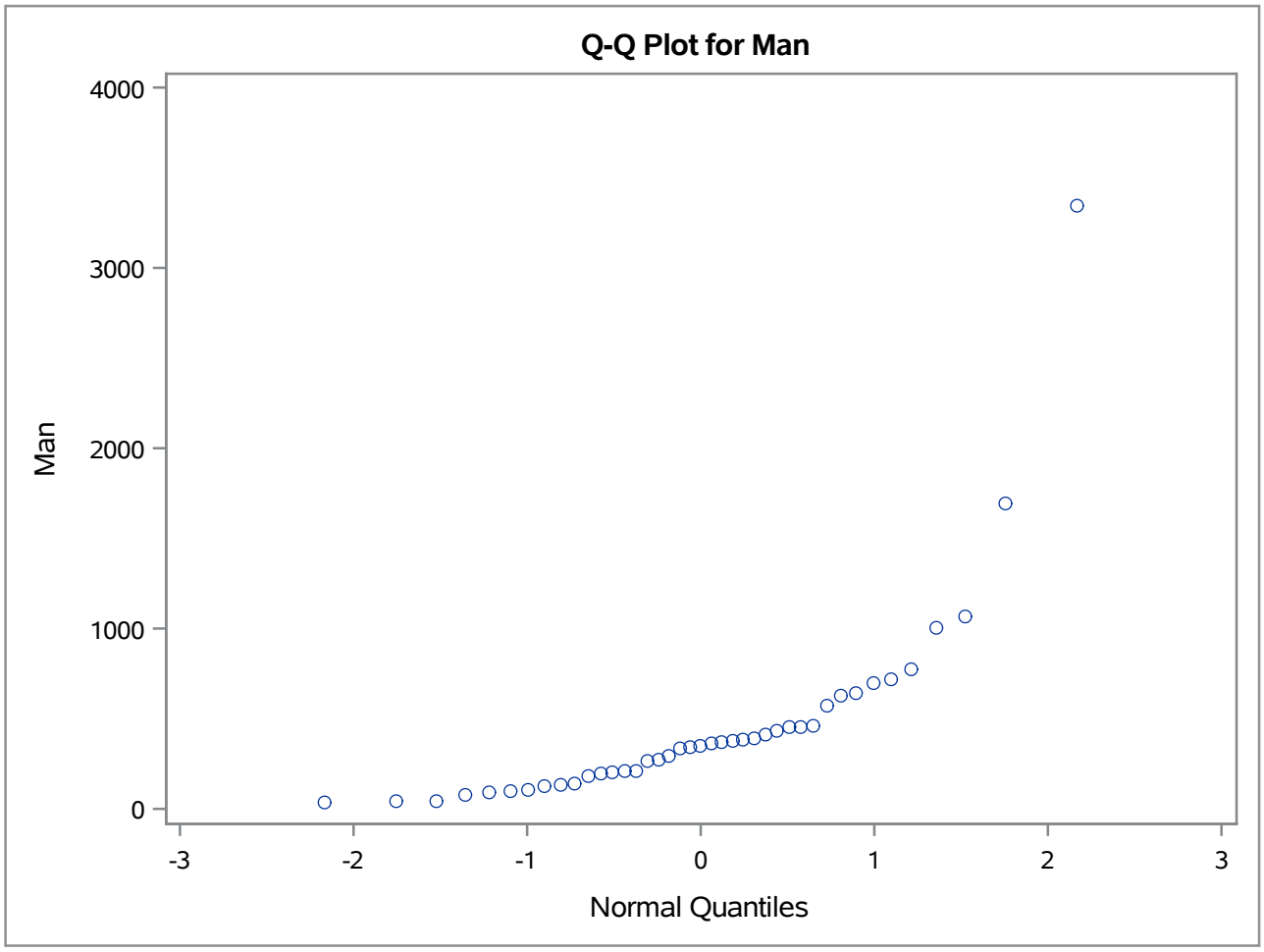
The UNIVARIATE Procedure
Variable: Man

Extreme Observations					
Lowest			Highest		
Value	City	Obs	Value	City	Obs
35	Charleston	40	775	St. Louis	21
44	Albany	24	1007	Cleveland	27
46	Albuquerque	23	1064	Detroit	18
80	Wilmington	6	1692	Philadelphia	29
91	Little Rock	2	3344	Chicago	11

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Pop

Moments			
N	41	**Sum Weights**	41
Mean	608.609756	**Sum Observations**	24953
Std Deviation	579.113023	**Variance**	335371.894
Skewness	3.16939401	**Kurtosis**	12.9301083
Uncorrected SS	28601515	**Corrected SS**	13414875.8
Coeff Variation	95.1534243	**Std Error Mean**	90.4422594

Basic Statistical Measures			
Location		**Variability**	
Mean	608.6098	**Std Deviation**	579.11302
Median	515.0000	**Variance**	335372
Mode	.	**Range**	3298
		Interquartile Range	418.00000

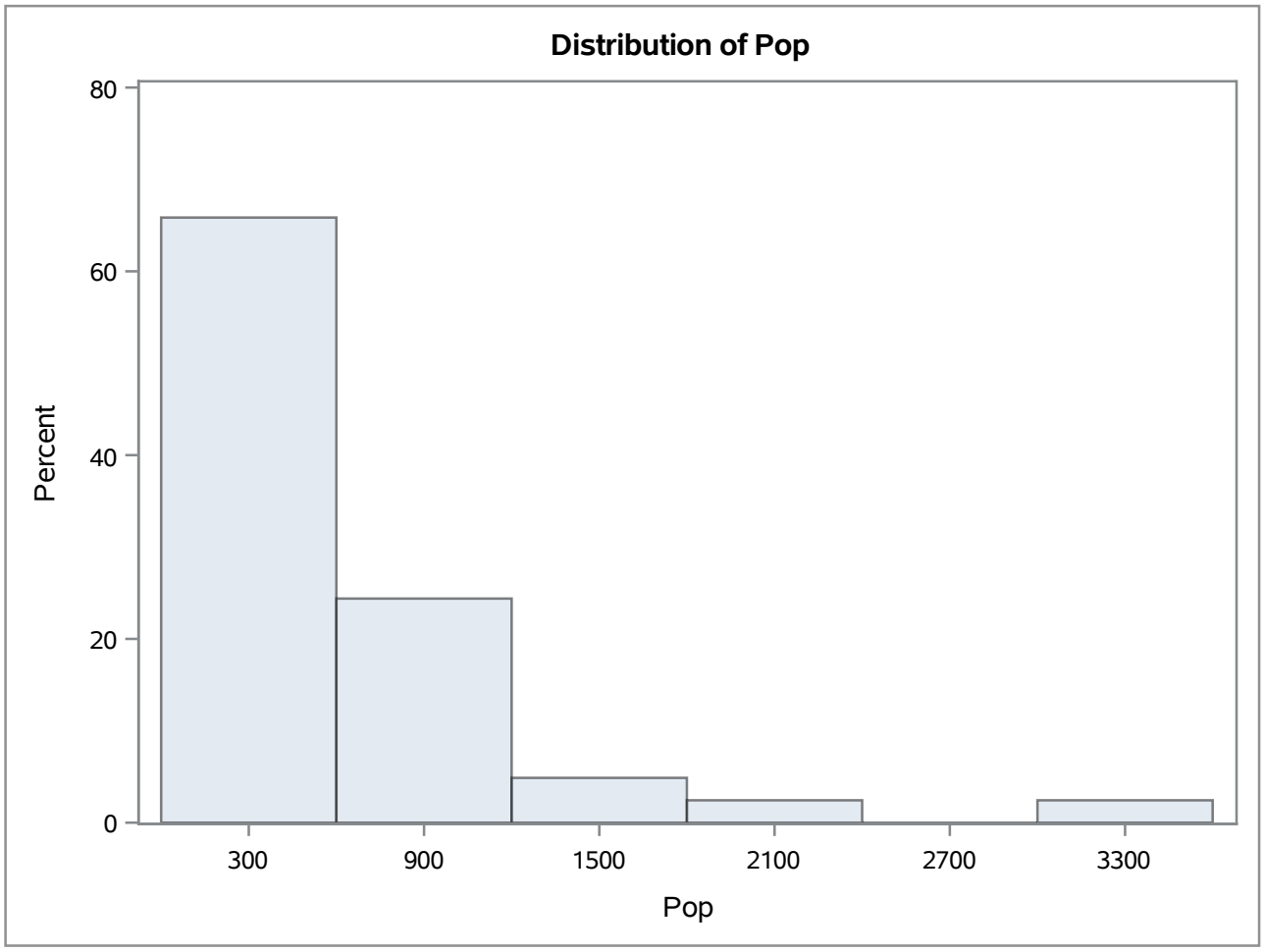
Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	6.729263	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	3369
99%	3369
95%	1513
90%	905
75% Q3	717
50% Median	515
25% Q1	299
10%	158
5%	116
1%	71
0% Min	71

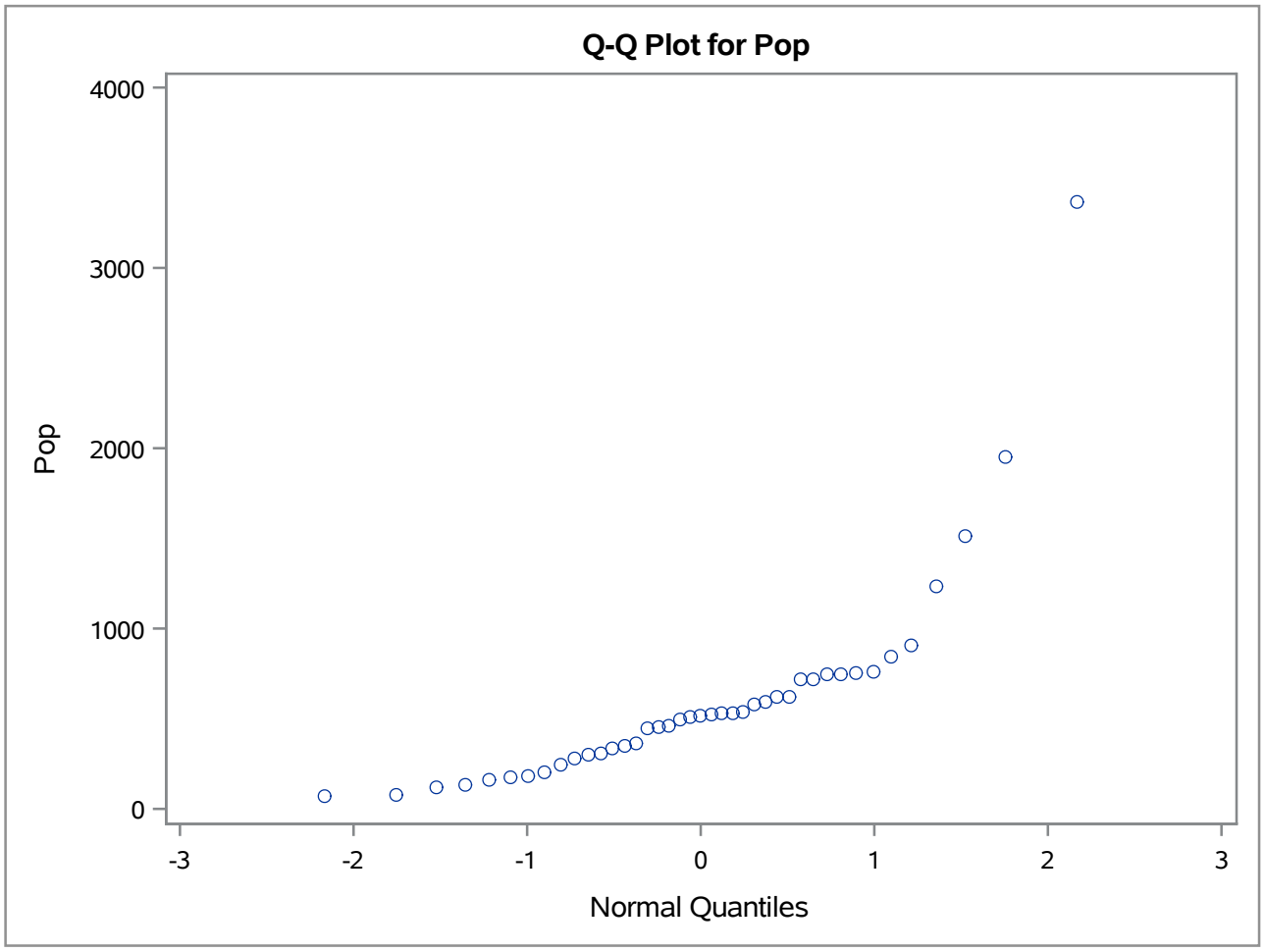
The UNIVARIATE Procedure
Variable: Pop

Extreme Observations					
Lowest			Highest		
Value	City	Obs	Value	City	Obs
71	Charleston	40	905	Baltimore	17
80	Wilmington	6	1233	Houston	35
116	Albany	24	1513	Detroit	18
132	Little Rock	2	1950	Philadelphia	29
158	Hartford	5	3369	Chicago	11

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Wind

Moments			
N	41	**Sum Weights**	41
Mean	9.44390244	**Sum Observations**	387.2
Std Deviation	1.42864425	**Variance**	2.04102439
Skewness	0.00288263	**Kurtosis**	0.40575232
Uncorrected SS	3738.32	**Corrected SS**	81.6409756
Coeff Variation	15.1276896	**Std Error Mean**	0.22311675

Basic Statistical Measures			
Location		**Variability**	
Mean	9.443902	**Std Deviation**	1.42864
Median	9.300000	**Variance**	2.04102
Mode	9.000000	**Range**	6.70000
		Interquartile Range	1.90000

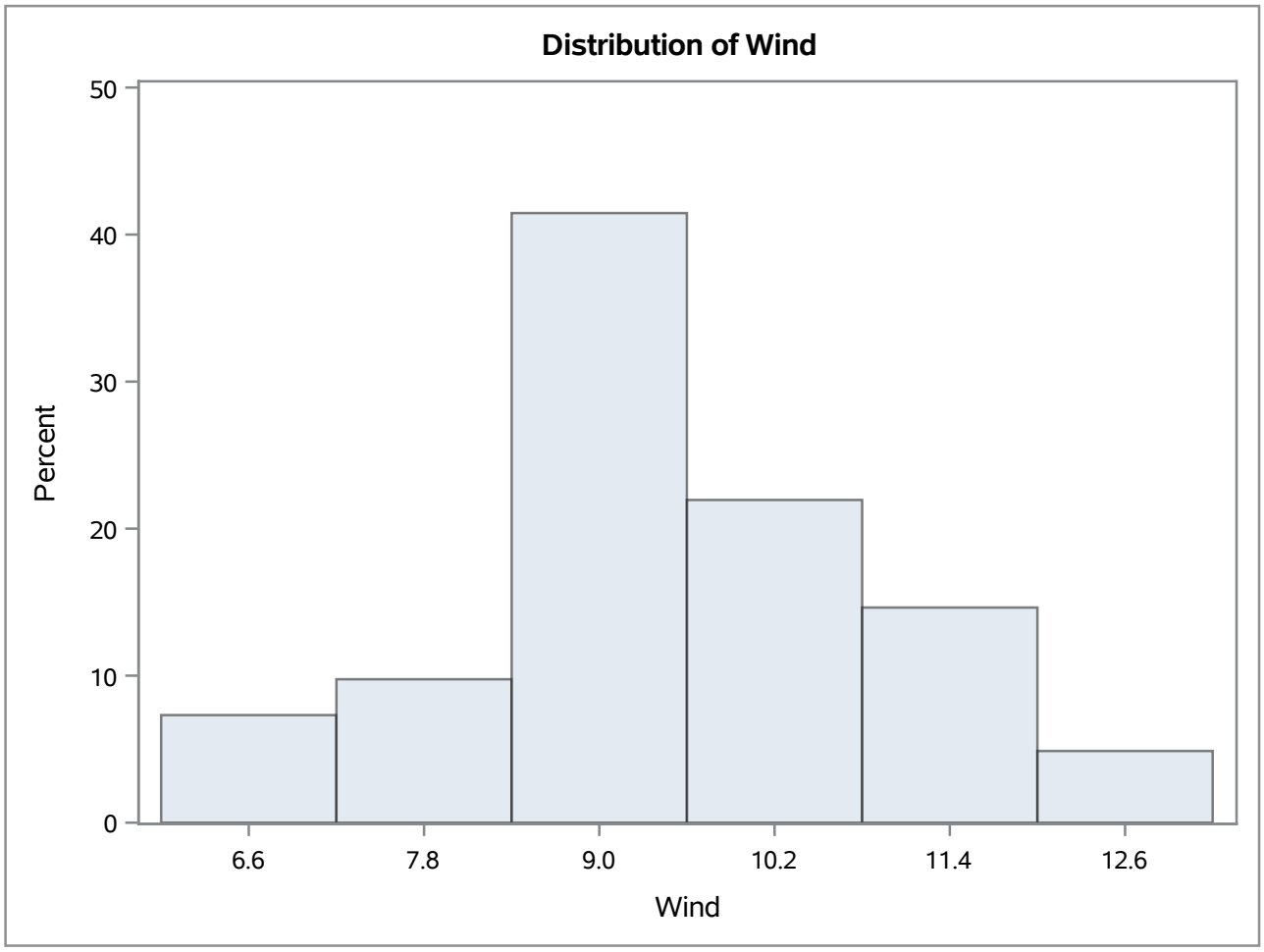
Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	42.32718	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	12.7
99%	12.7
95%	11.8
90%	10.9
75% Q3	10.6
50% Median	9.3
25% Q1	8.7
10%	7.9
5%	7.1
1%	6.0
0% Min	6.0

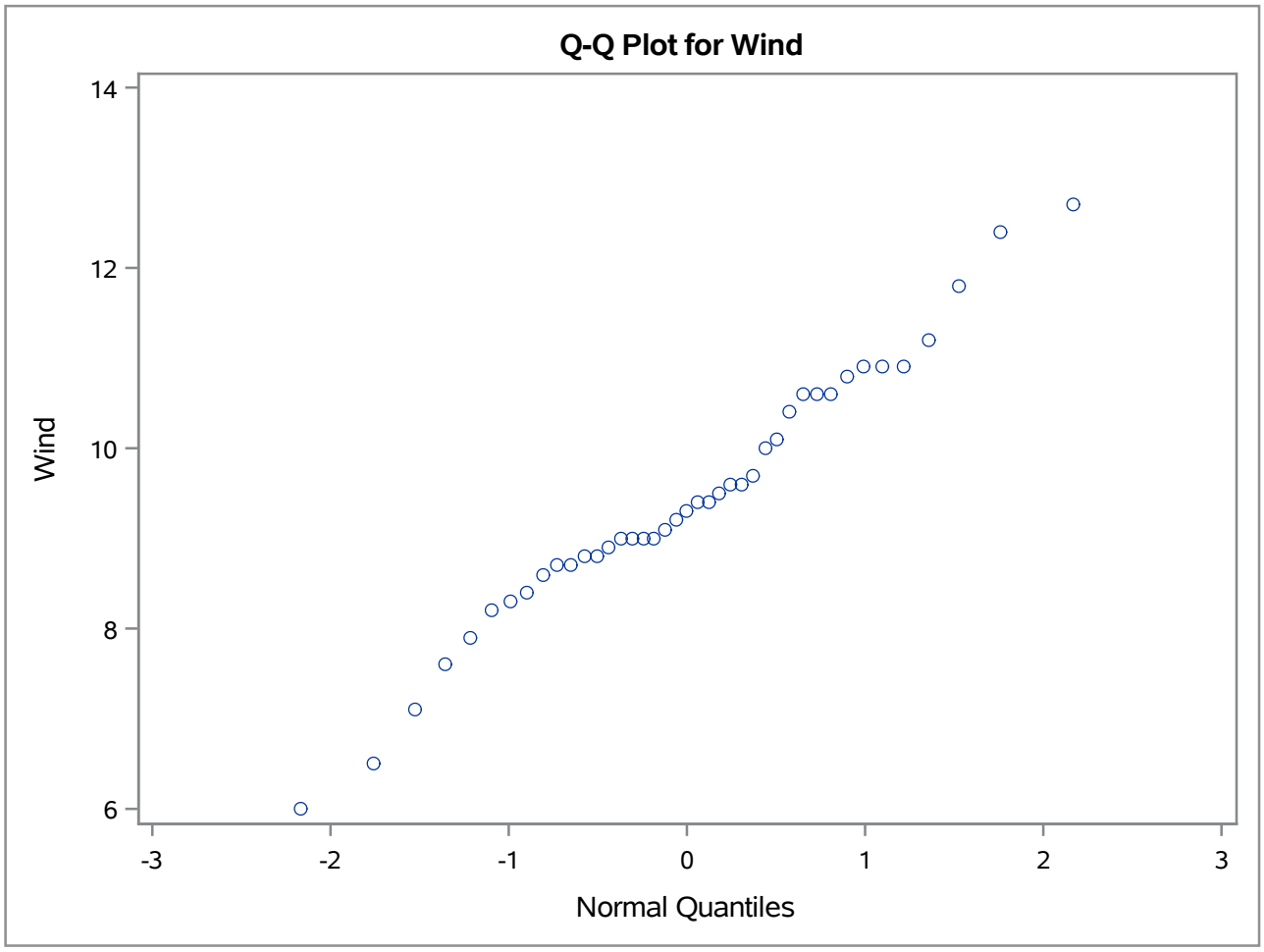
The UNIVARIATE Procedure
Variable: Wind

Extreme Observations					
Lowest			Highest		
Value	City	Obs	Value	City	Obs
6.0	Phoenix	1	10.9	Dallas	34
6.5	Charleston	40	11.2	Des Moines	13
7.1	Cincinnati	26	11.8	Milwaukee	41
7.6	Richmond	38	12.4	Buffalo	25
7.9	Nashville	33	12.7	Wichita	14

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Rain

Moments			
N	41	**Sum Weights**	41
Mean	36.7690244	**Sum Observations**	1507.53
Std Deviation	11.7715498	**Variance**	138.569384
Skewness	-0.7462327	**Kurtosis**	0.92457953
Uncorrected SS	60973.1827	**Corrected SS**	5542.77536
Coeff Variation	32.0148548	**Std Error Mean**	1.83840721

Basic Statistical Measures			
Location		**Variability**	
Mean	36.76902	**Std Deviation**	11.77155
Median	38.74000	**Variance**	138.56938
Mode	.	**Range**	52.75000
		Interquartile Range	12.15000

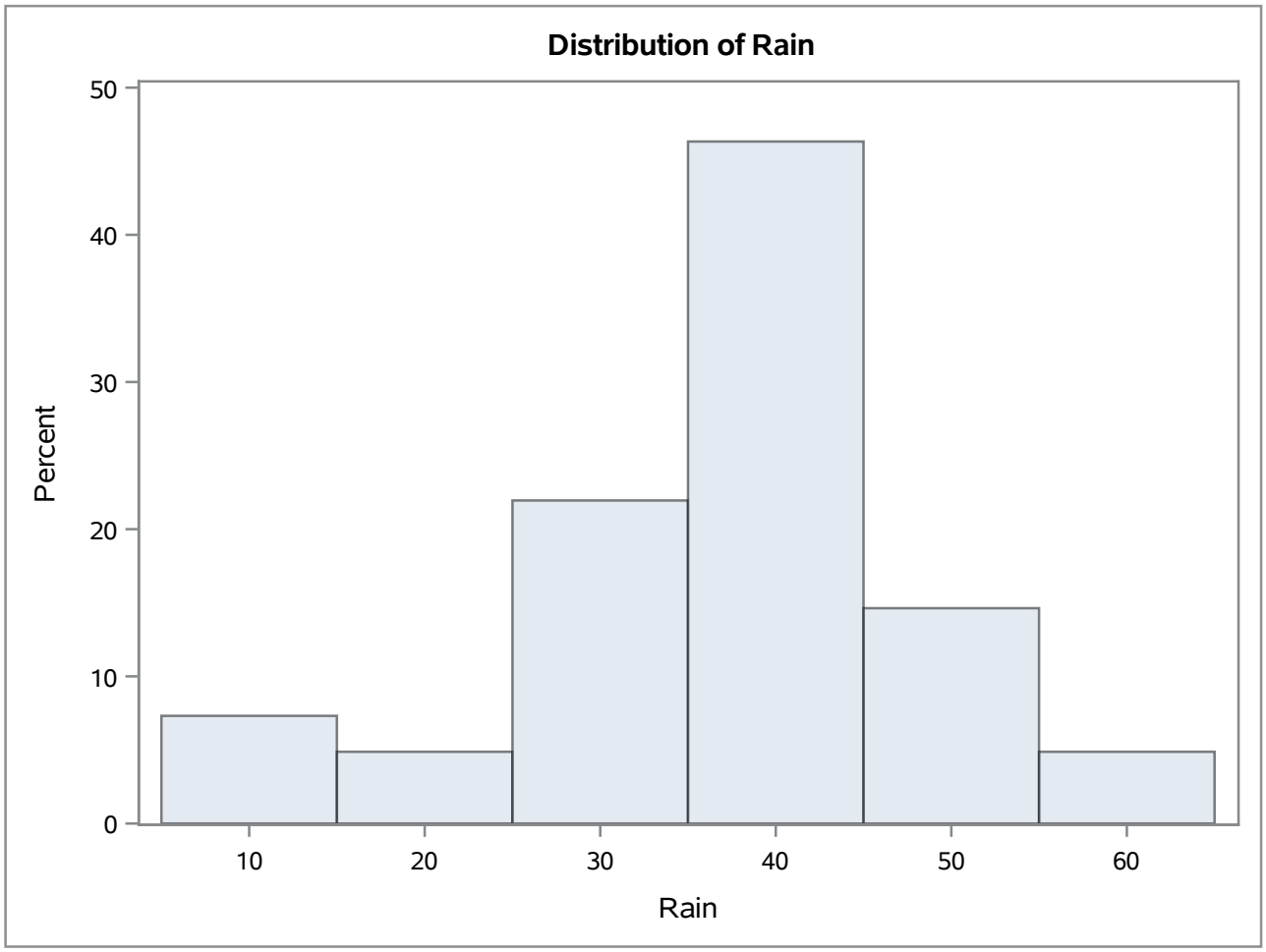
Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	20.00048	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	59.80
99%	59.80
95%	54.47
90%	48.52
75% Q3	43.11
50% Median	38.74
25% Q1	30.96
10%	20.66
5%	12.95
1%	7.05
0% Min	7.05

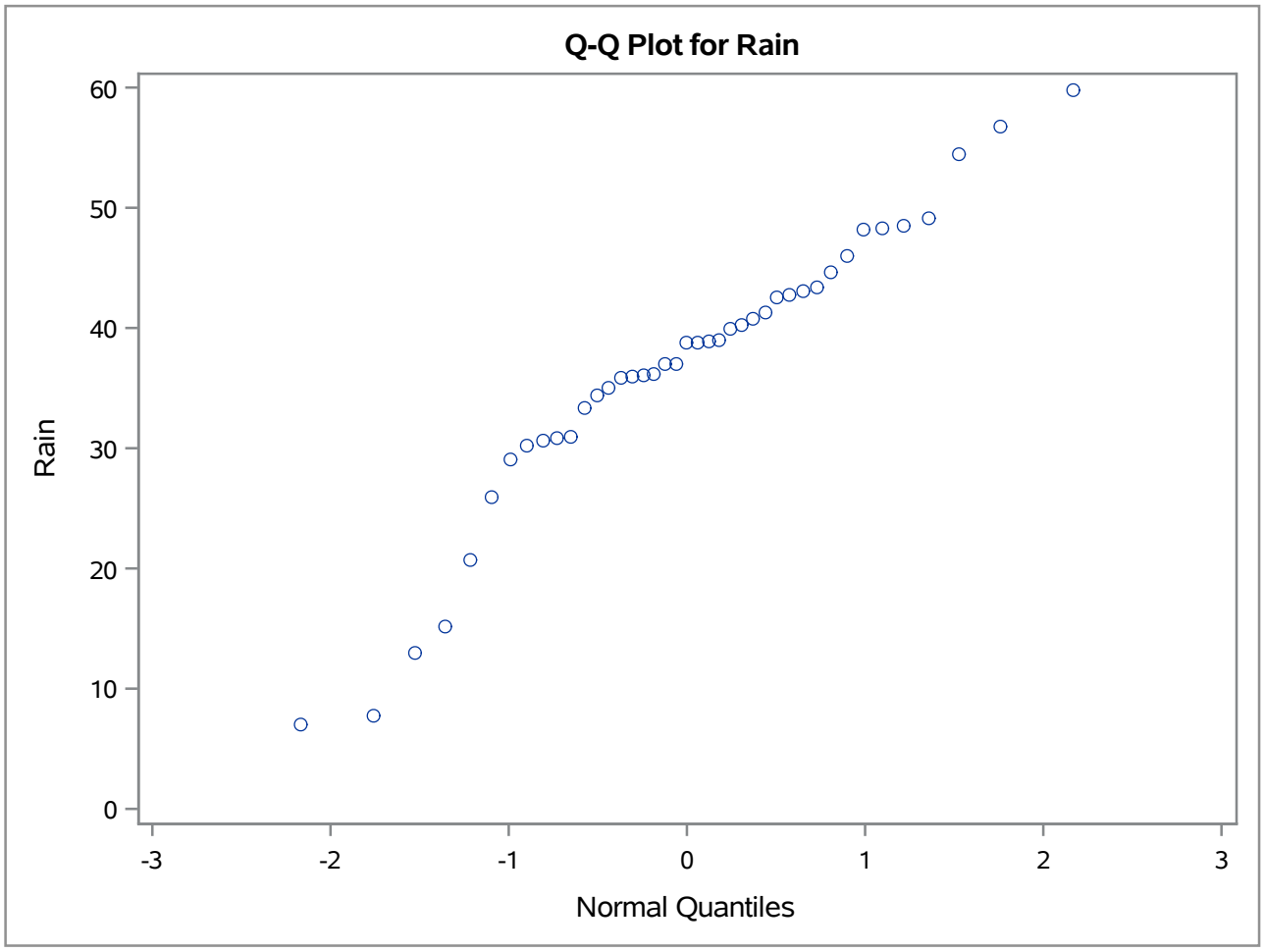
The UNIVARIATE Procedure
Variable: Rain

Extreme Observations					
Lowest			Highest		
Value	City	Obs	Value	City	Obs
7.05	Phoenix	1	48.52	Little Rock	2
7.77	Albuquerque	23	49.10	Memphis	32
12.95	Denver	4	54.47	Jacksonville	8
15.17	Salt Lake Cit	36	56.77	New Orleans	16
20.66	San Francisco	3	59.80	Miami	9

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: RainDays

Moments			
N	41	**Sum Weights**	41
Mean	113.902439	**Sum Observations**	4670
Std Deviation	26.5064189	**Variance**	702.590244
Skewness	-0.5927597	**Kurtosis**	1.19202805
Uncorrected SS	560028	**Corrected SS**	28103.6098
Coeff Variation	23.2711601	**Std Error Mean**	4.13960716

Basic Statistical Measures			
Location		**Variability**	
Mean	113.9024	**Std Deviation**	26.50642
Median	115.0000	**Variance**	702.59024
Mode	115.0000	**Range**	130.00000
		Interquartile Range	25.00000

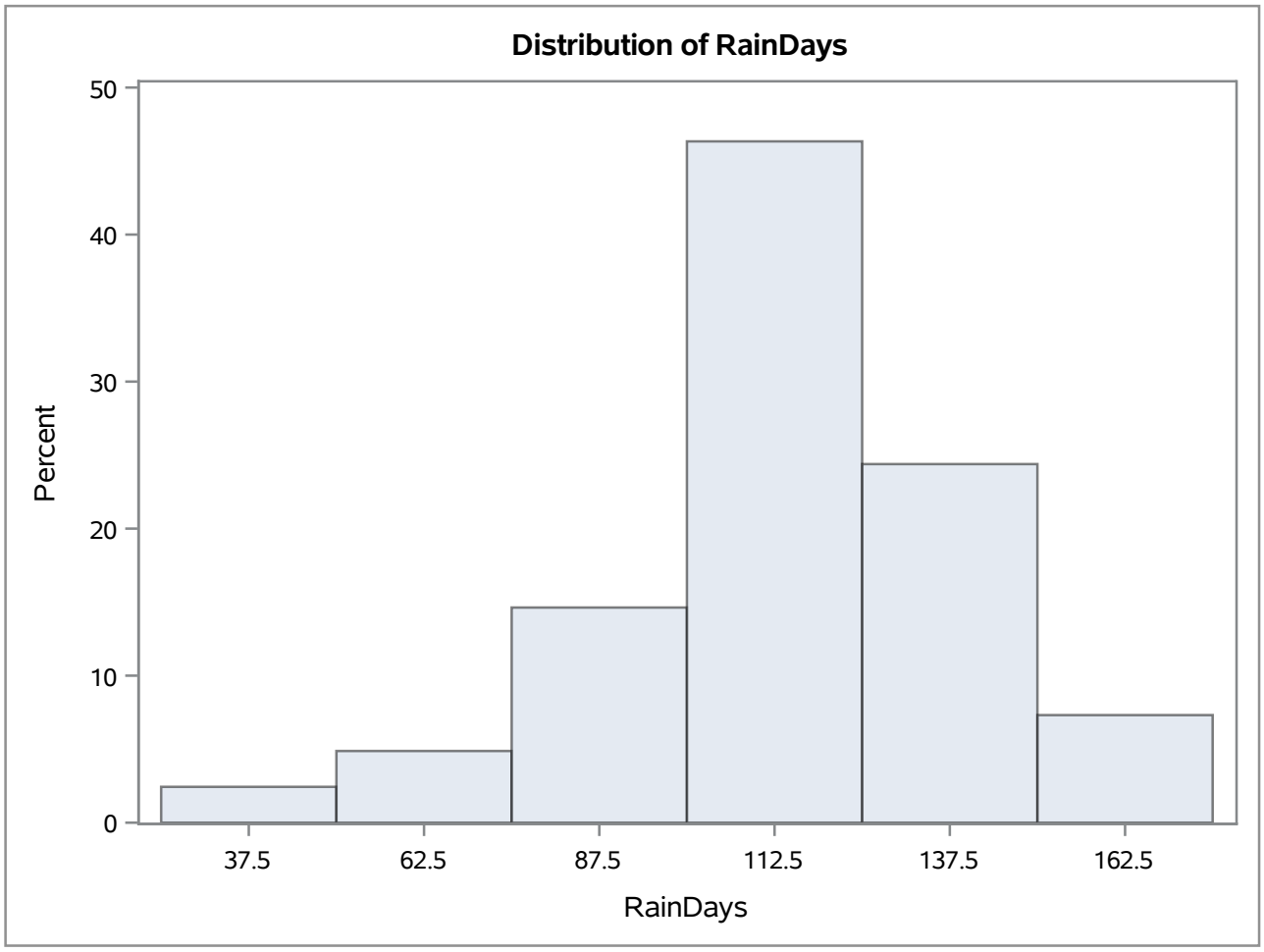
Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	27.51528	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Quantiles (Definition 5)	
Level	**Quantile**
100% Max	166
99%	166
95%	155
90%	147
75% Q3	128
50% Median	115
25% Q1	103
10%	82
5%	67
1%	36
0% Min	36

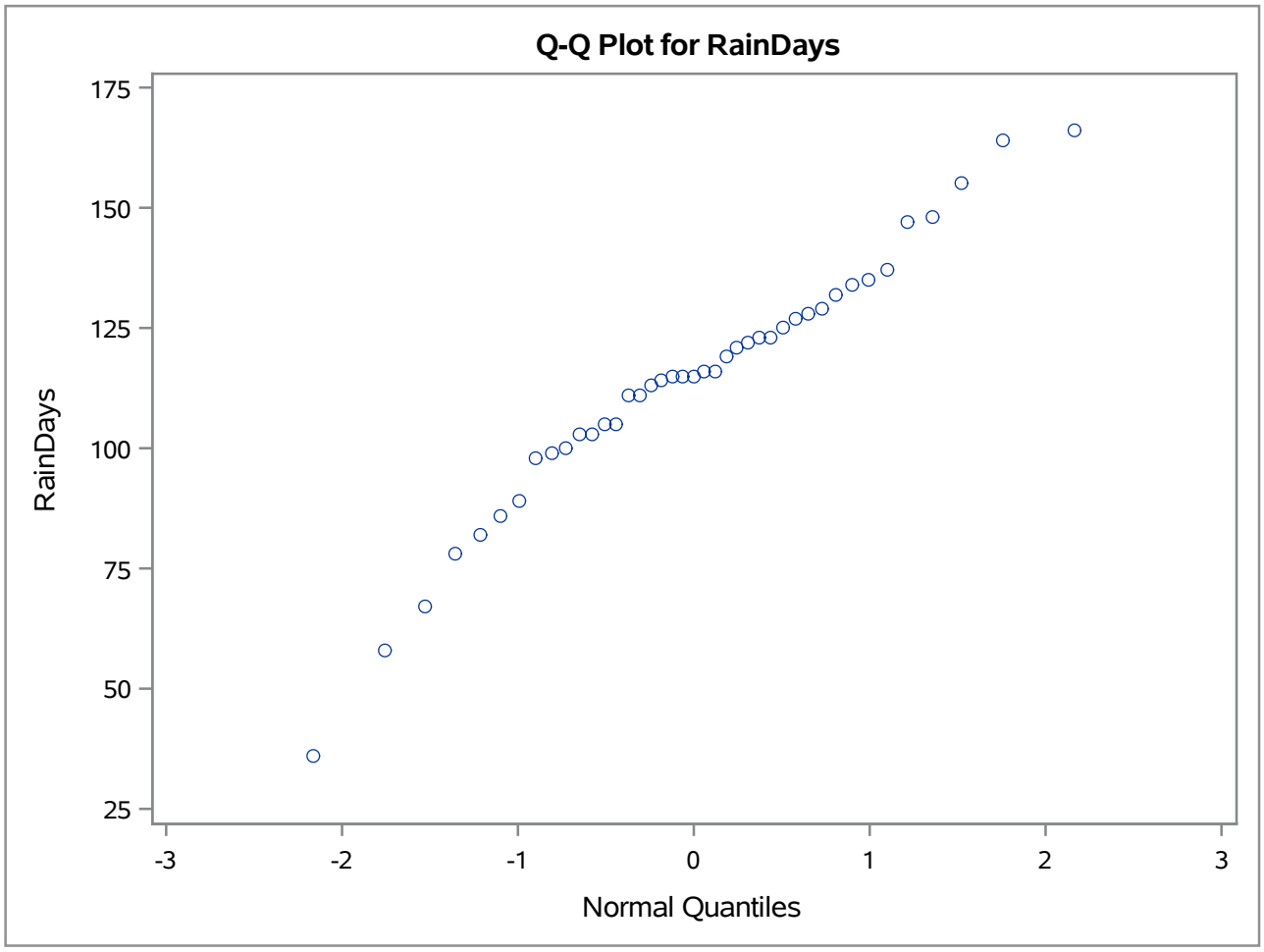
The UNIVARIATE Procedure
Variable: RainDays

Extreme Observations					
Lowest			Highest		
Value	City	Obs	Value	City	Obs
36	Phoenix	1	147	Pittsburgh	30
58	Albuquerque	23	148	Charleston	40
67	San Francisco	3	155	Cleveland	27
78	Dallas	34	164	Seattle	39
82	Wichita	14	166	Buffalo	25

The UNIVARIATE Procedure



The UNIVARIATE Procedure



The REG Procedure
Model: MODEL1
Dependent Variable: SO2

Number of Observations Read	41
Number of Observations Used	41

Backward Elimination: Step 0

All Variables Entered: R-Square = 0.6695 and C(p) = 7.0000

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	14755	2459.10601	11.48	<.0001
Error	34	7283.26641	214.21372		
Corrected Total	40	22038			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	111.72848	47.31810	1194.31931	5.58	0.0241
Temp	-1.26794	0.62118	892.50607	4.17	0.0491
Man	0.06492	0.01575	3640.11390	16.99	0.0002
Pop	-0.03928	0.01513	1443.05609	6.74	0.0138
Wind	-3.18137	1.81502	658.13061	3.07	0.0887
Rain	0.51236	0.36276	427.33549	1.99	0.1669
RainDays	-0.05205	0.16201	22.10994	0.10	0.7500

Bounds on condition number: 14.704, 245.48

Backward Elimination: Step 1

Variable RainDays Removed: R-Square = 0.6685 and C(p) = 5.1032

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	14733	2946.50522	14.12	<.0001
Error	35	7305.37635	208.72504		
Corrected Total	40	22038			

The REG Procedure
Model: MODEL1
Dependent Variable: SO2

Backward Elimination: Step 1

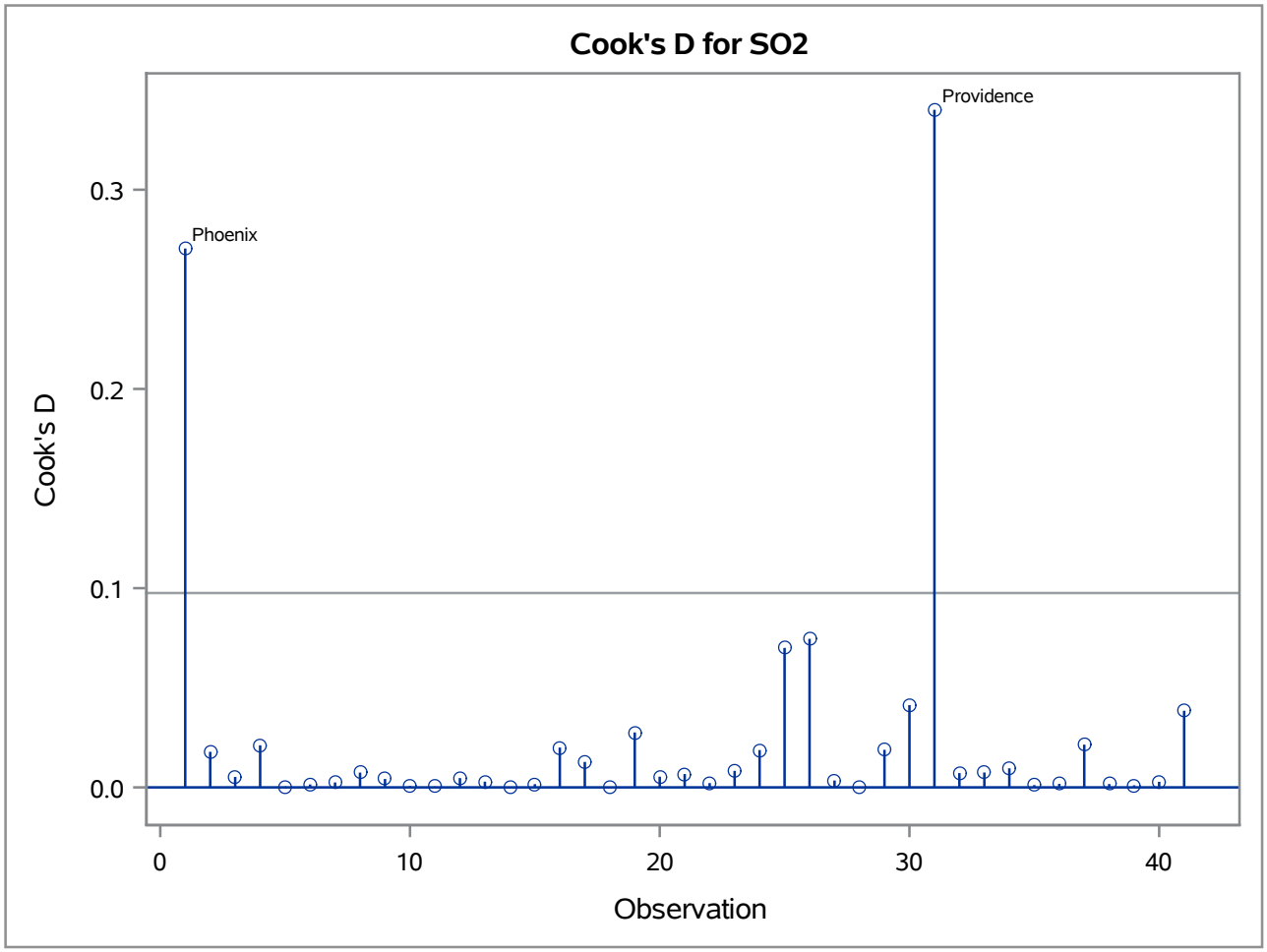
Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	100.15245	30.27521	2284.14417	10.94	0.0022
Temp	-1.12129	0.41586	1517.42575	7.27	0.0107
Man	0.06489	0.01554	3636.77072	17.42	0.0002
Pop	-0.03933	0.01494	1447.52063	6.94	0.0125
Wind	-3.08240	1.76562	636.14543	3.05	0.0896
Rain	0.41947	0.21624	785.38334	3.76	0.0605

Bounds on condition number: 14.703, 166.17

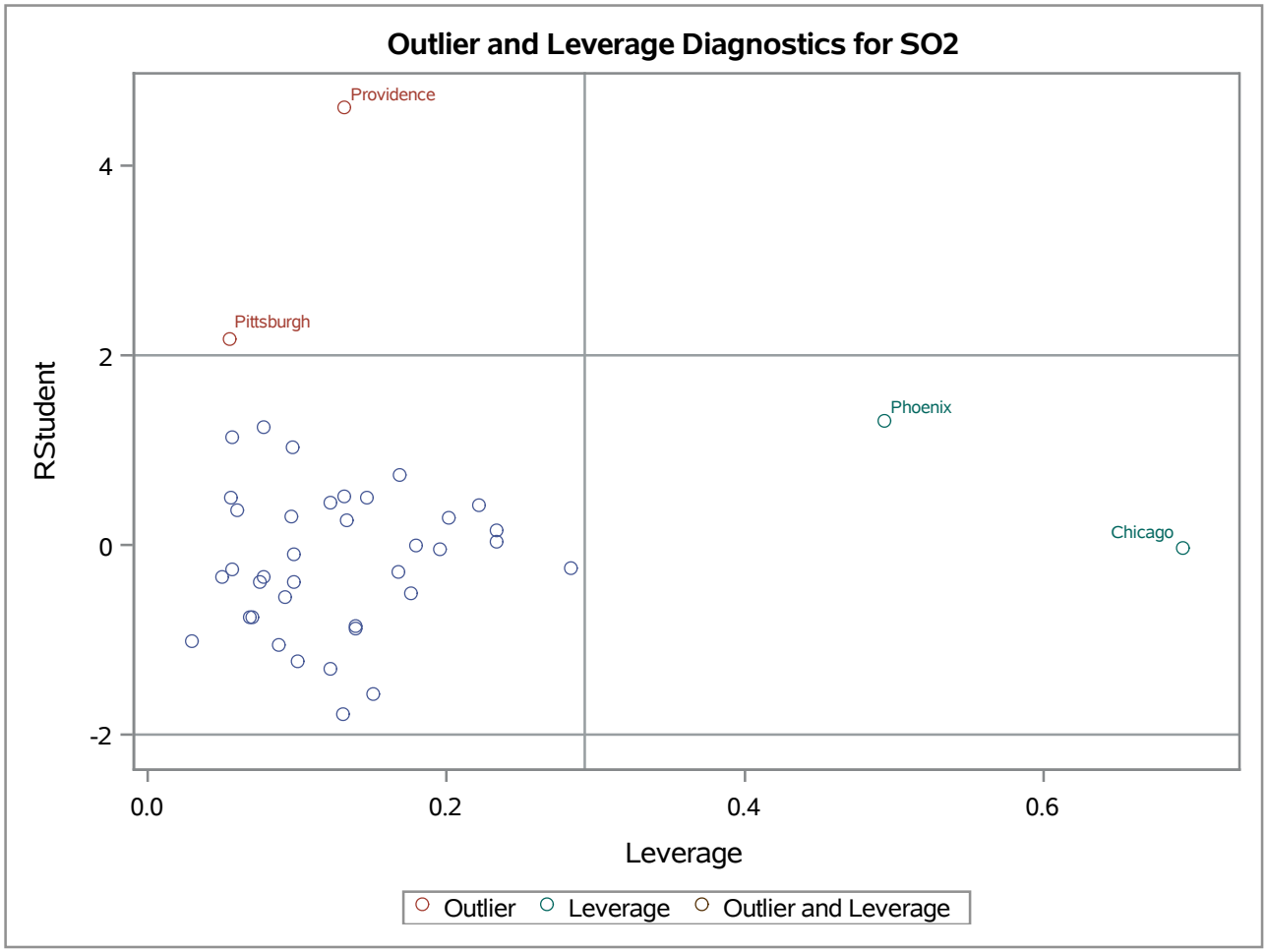
All variables left in the model are significant at the 0.1000 level.

Summary of Backward Elimination							
Step	**Variable Removed**	**Number Vars In**	**Partial R-Square**	**Model R-Square**	**C(p)**	**F Value**	**Pr > F**
1	RainDays	5	0.0010	0.6685	5.1032	0.10	0.7500

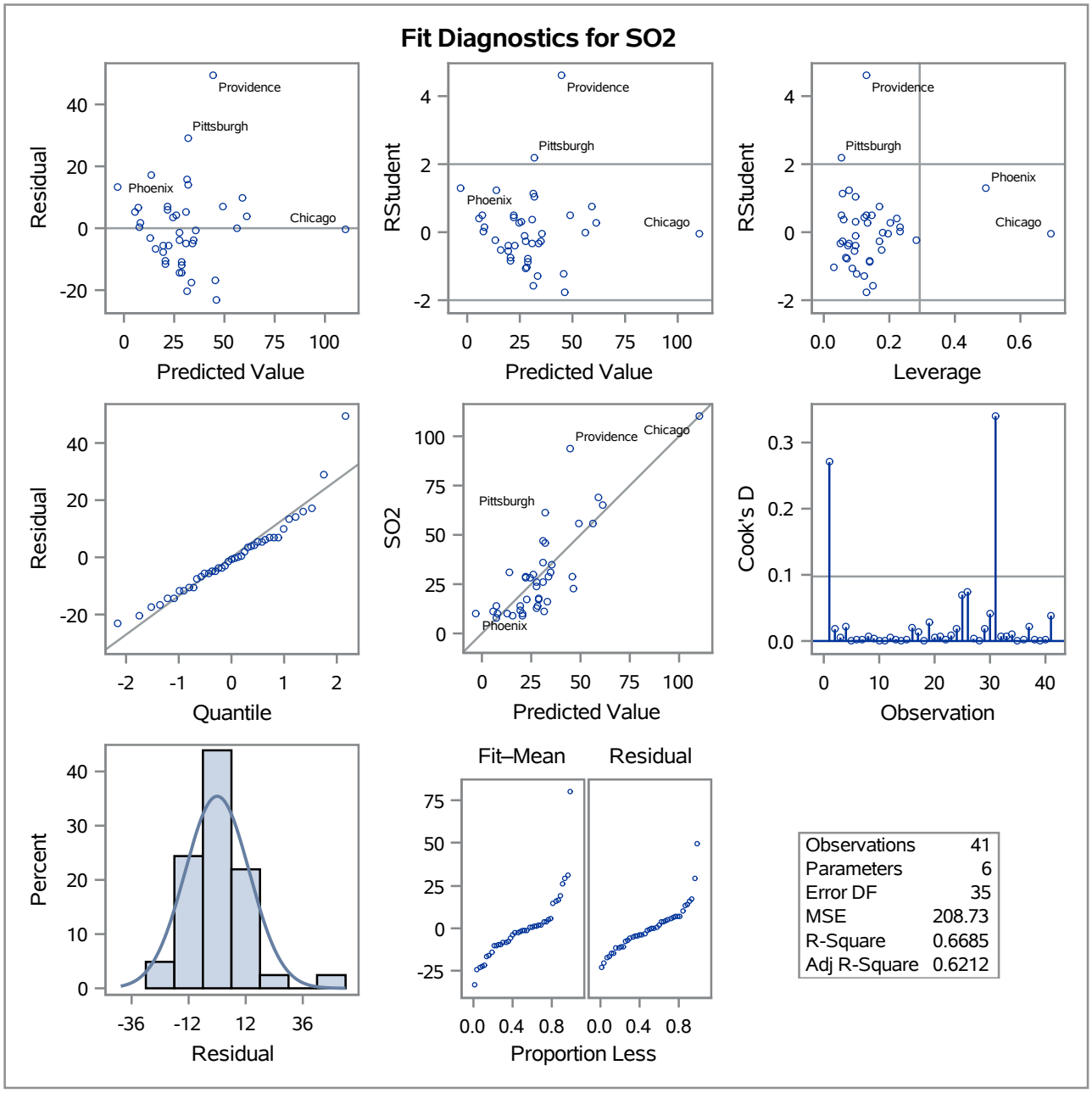
The REG Procedure
Model: MODEL1
Dependent Variable: SO2



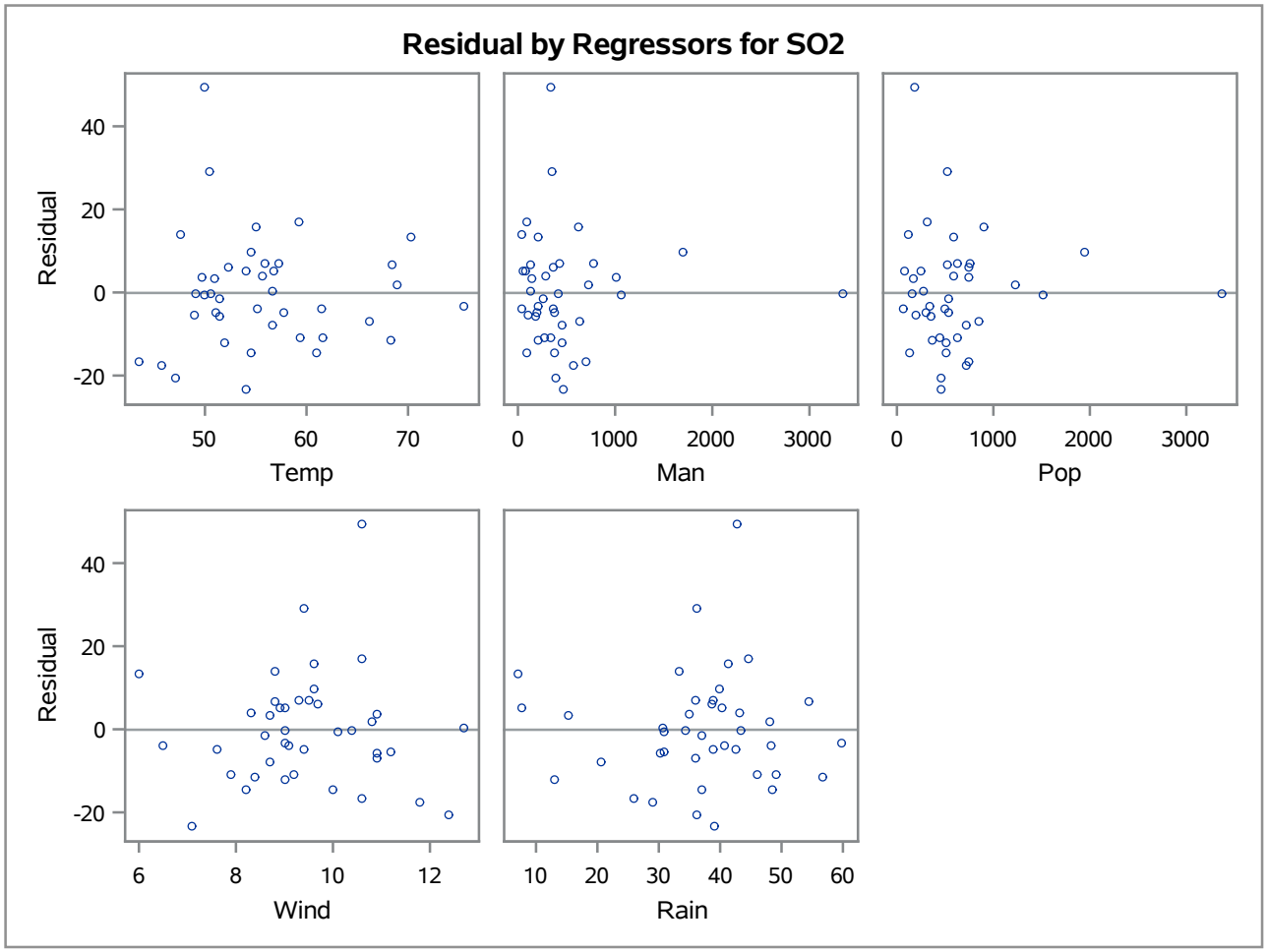
The REG Procedure
Model: MODEL1
Dependent Variable: SO2



The REG Procedure
Model: MODEL1
Dependent Variable: SO2



The REG Procedure
Model: MODEL1
Dependent Variable: SO2



The CORR Procedure

7 Variables:	logSO2	logTemp	logMan	logPop	Wind	RainSq	RainDays

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
logSO2	41	3.15300	0.70230	129.27315	2.07944	4.70048
logTemp	41	4.01333	0.12490	164.54658	3.77276	4.32413
logMan	41	5.69209	0.96343	233.37587	3.55535	8.11492
logPop	41	6.10170	0.80443	250.16990	4.26268	8.12237
Wind	41	9.44390	1.42864	387.20000	6.00000	12.70000
RainSq	41	1487	793.18175	60973	49.70250	3576
RainDays	41	113.90244	26.50642	4670	36.00000	166.00000

Pearson Correlation Coefficients, N = 41
Prob > |r| under H0: Rho=0

	logSO2	logTemp	logMan	logPop	Wind	RainSq	RainDays
logSO2	1.00000	-0.53495 0.0003	0.33816 0.0306	0.10048 0.5319	-0.01353 0.9331	-0.07658 0.6342	0.47857 0.0016
logTemp	-0.53495 0.0003	1.00000	-0.16274 0.3093	0.04105 0.7989	-0.36651 0.0184	0.54712 0.0002	-0.44664 0.0034
logMan	0.33816 0.0306	-0.16274 0.3093	1.00000	0.86588 <.0001	0.31235 0.0468	-0.04673 0.7717	0.16225 0.3108
logPop	0.10048 0.5319	0.04105 0.7989	0.86588 <.0001	1.00000	0.26804 0.0902	-0.06809 0.6723	-0.01185 0.9414
Wind	-0.01353 0.9331	-0.36651 0.0184	0.31235 0.0468	0.26804 0.0902	1.00000	-0.12178 0.4481	0.16411 0.3052
RainSq	-0.07658 0.6342	0.54712 0.0002	-0.04673 0.7717	-0.06809 0.6723	-0.12178 0.4481	1.00000	0.36593 0.0186
RainDays	0.47857 0.0016	-0.44664 0.0034	0.16225 0.3108	-0.01185 0.9414	0.16411 0.3052	0.36593 0.0186	1.00000

The UNIVARIATE Procedure
Variable: SO2

Moments			
N	41	**Sum Weights**	41
Mean	30.0487805	**Sum Observations**	1232
Std Deviation	23.4722722	**Variance**	550.947561
Skewness	1.70698288	**Kurtosis**	3.02028547
Uncorrected SS	59058	**Corrected SS**	22037.9024
Coeff Variation	78.1138928	**Std Error Mean**	3.66575305

Basic Statistical Measures			
Location		**Variability**	
Mean	30.04878	**Std Deviation**	23.47227
Median	26.00000	**Variance**	550.94756
Mode	10.00000	**Range**	102.00000
		Interquartile Range	22.00000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	8.197164	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.811651	**Pr < W**	<0.0001
Kolmogorov-Smirnov	**D**	0.215545	**Pr > D**	<0.0100
Cramer-von Mises	**W-Sq**	0.411586	**Pr > W-Sq**	<0.0050
Anderson-Darling	**A-Sq**	2.384104	**Pr > A-Sq**	<0.0050

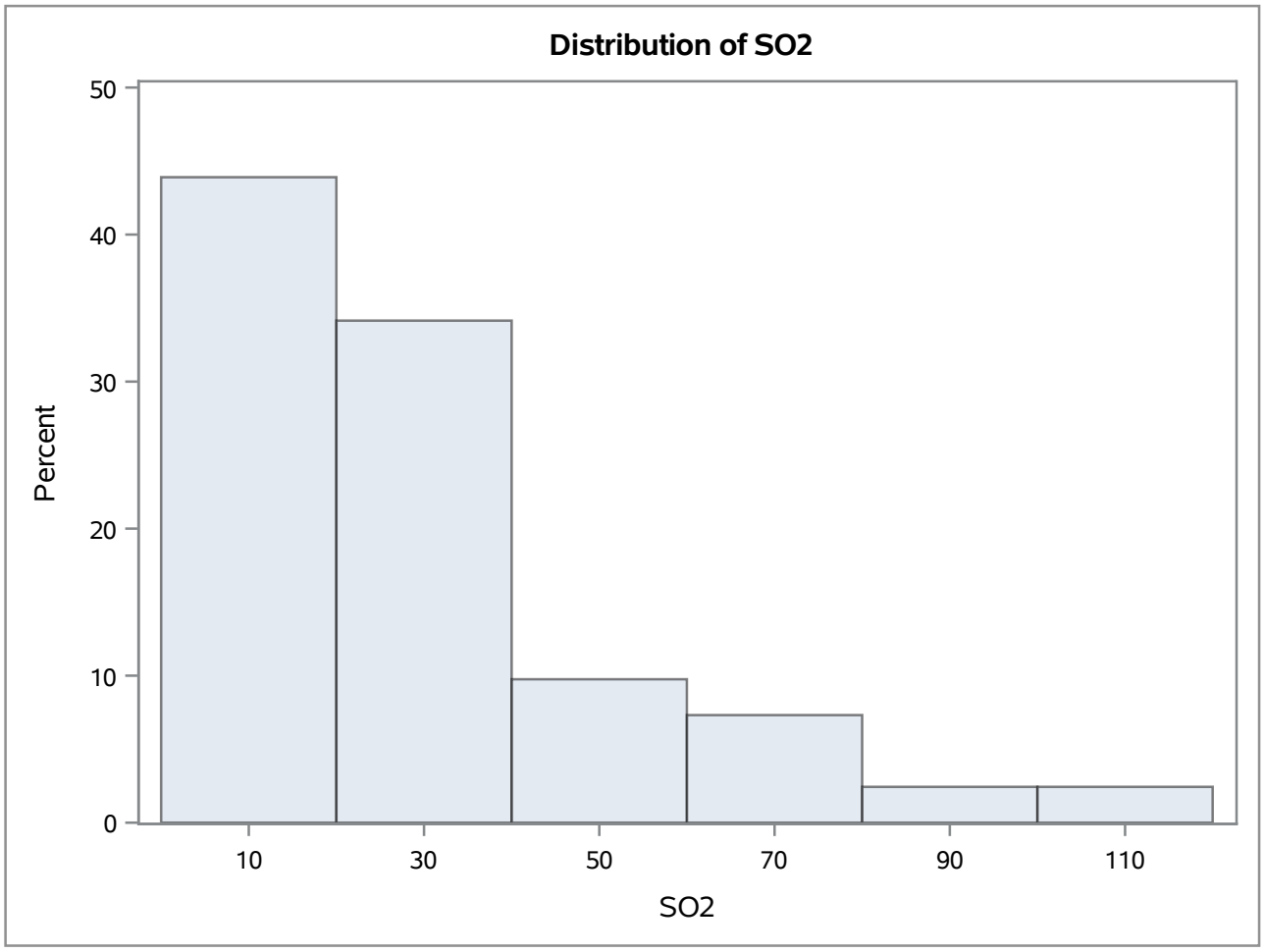
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	110
99%	110
95%	69
90%	61
75% Q3	35
50% Median	26
25% Q1	13

The UNIVARIATE Procedure
Variable: SO2

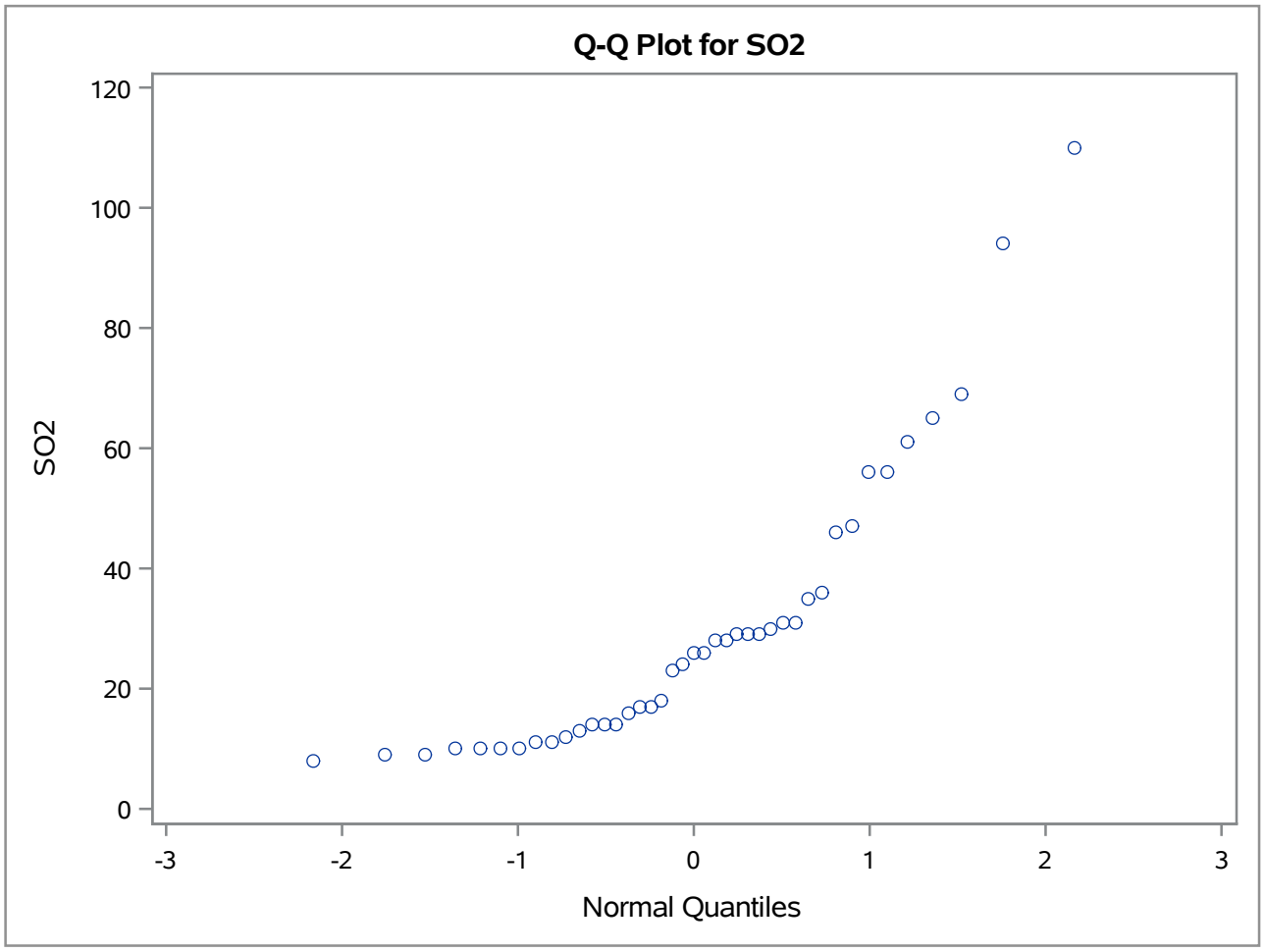
Quantiles (Definition 5)	
Level	**Quantile**
10%	10
5%	9
1%	8
0% Min	8

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
8	Wichita	14	61	Pittsburgh	30
9	Dallas	34	65	Cleveland	27
9	New Orleans	16	69	Philadelphia	29
10	Houston	35	94	Providence	31
10	Memphis	32	110	Chicago	11

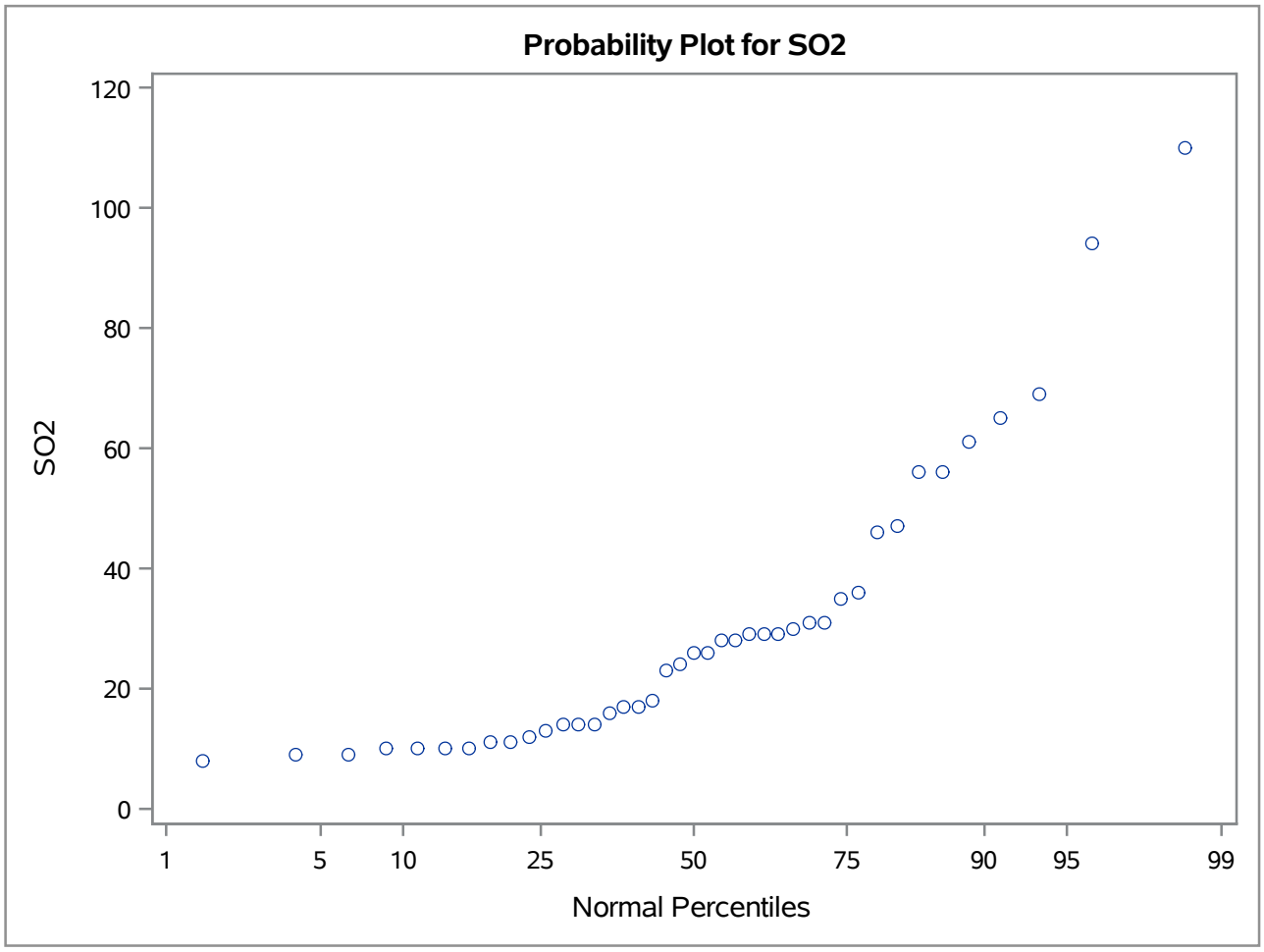
The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Temp

Moments			
N	41	**Sum Weights**	41
Mean	55.7634146	**Sum Observations**	2286.3
Std Deviation	7.22771596	**Variance**	52.239878
Skewness	0.88680905	**Kurtosis**	0.44208501
Uncorrected SS	129581.49	**Corrected SS**	2089.59512
Coeff Variation	12.9613942	**Std Error Mean**	1.12877959

Basic Statistical Measures			
Location		**Variability**	
Mean	55.76341	**Std Deviation**	7.22772
Median	54.60000	**Variance**	52.23988
Mode	51.50000	**Range**	32.00000
		Interquartile Range	8.70000

Note: The mode displayed is the smallest of 2 modes with a count of 2.

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	49.40151	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.935542	**Pr < W**	0.0221
Kolmogorov-Smirnov	**D**	0.125907	**Pr > D**	0.0983
Cramer-von Mises	**W-Sq**	0.155135	**Pr > W-Sq**	0.0205
Anderson-Darling	**A-Sq**	0.963307	**Pr > A-Sq**	0.0149

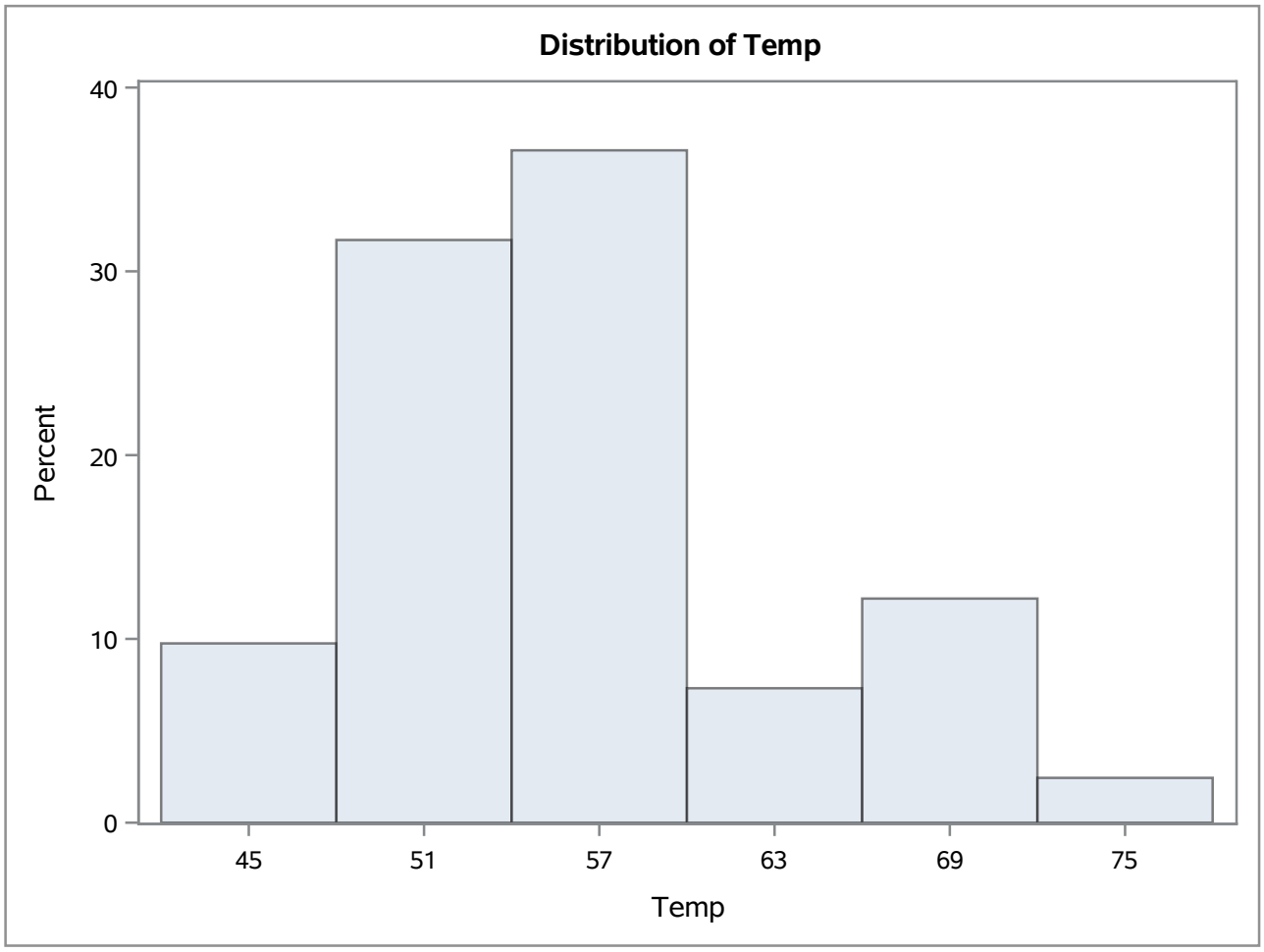
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	75.5
99%	75.5
95%	68.9
90%	68.3
75% Q3	59.3
50% Median	54.6

The UNIVARIATE Procedure
Variable: Temp

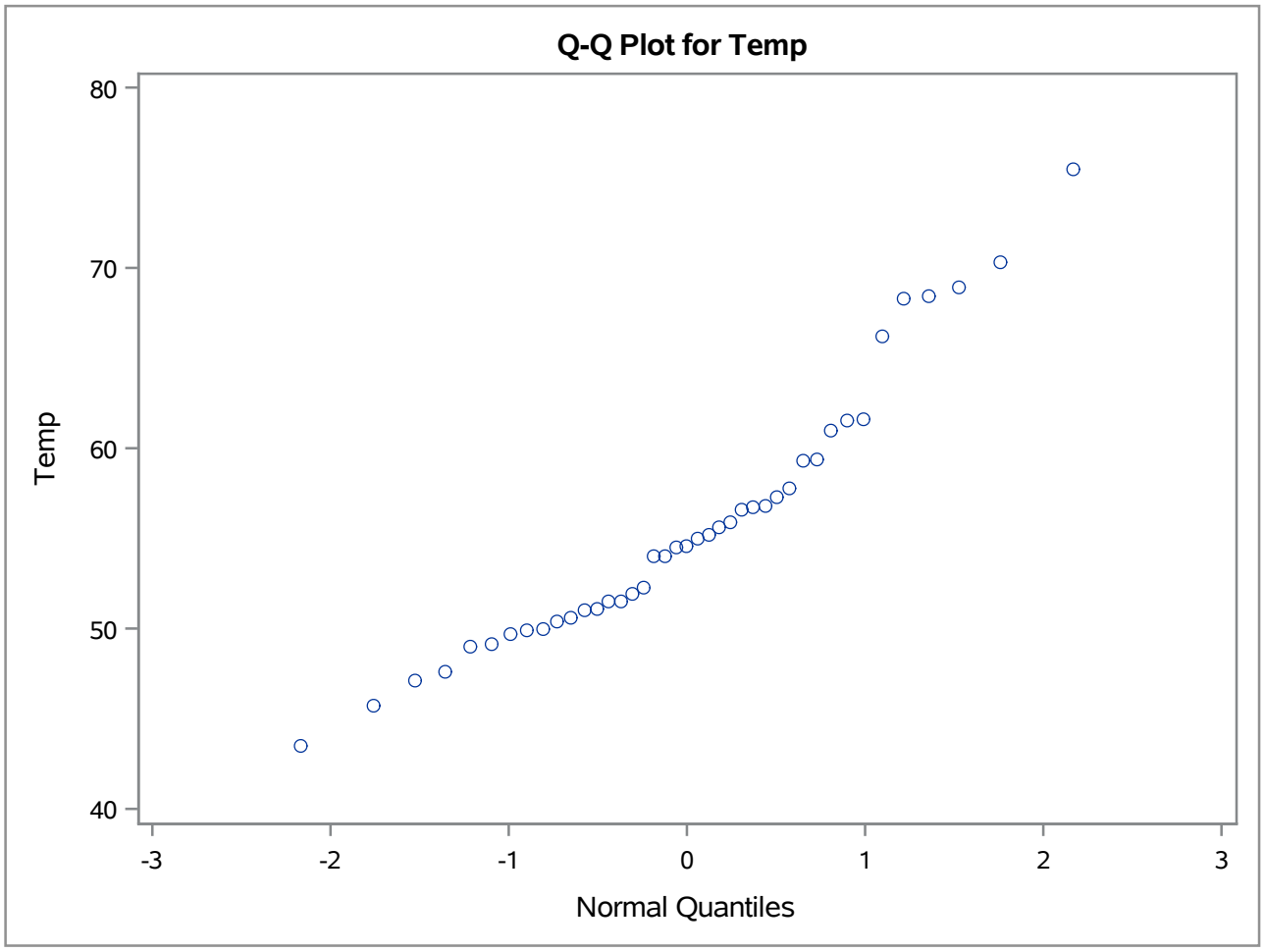
Quantiles (Definition 5)	
Level	**Quantile**
25% Q1	50.6
10%	49.0
5%	47.1
1%	43.5
0% Min	43.5

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
43.5	Minn-St. Paul	19	68.3	New Orleans	16
45.7	Milwaukee	41	68.4	Jacksonville	8
47.1	Buffalo	25	68.9	Houston	35
47.6	Albany	24	70.3	Phoenix	1
49.0	Des Moines	13	75.5	Miami	9

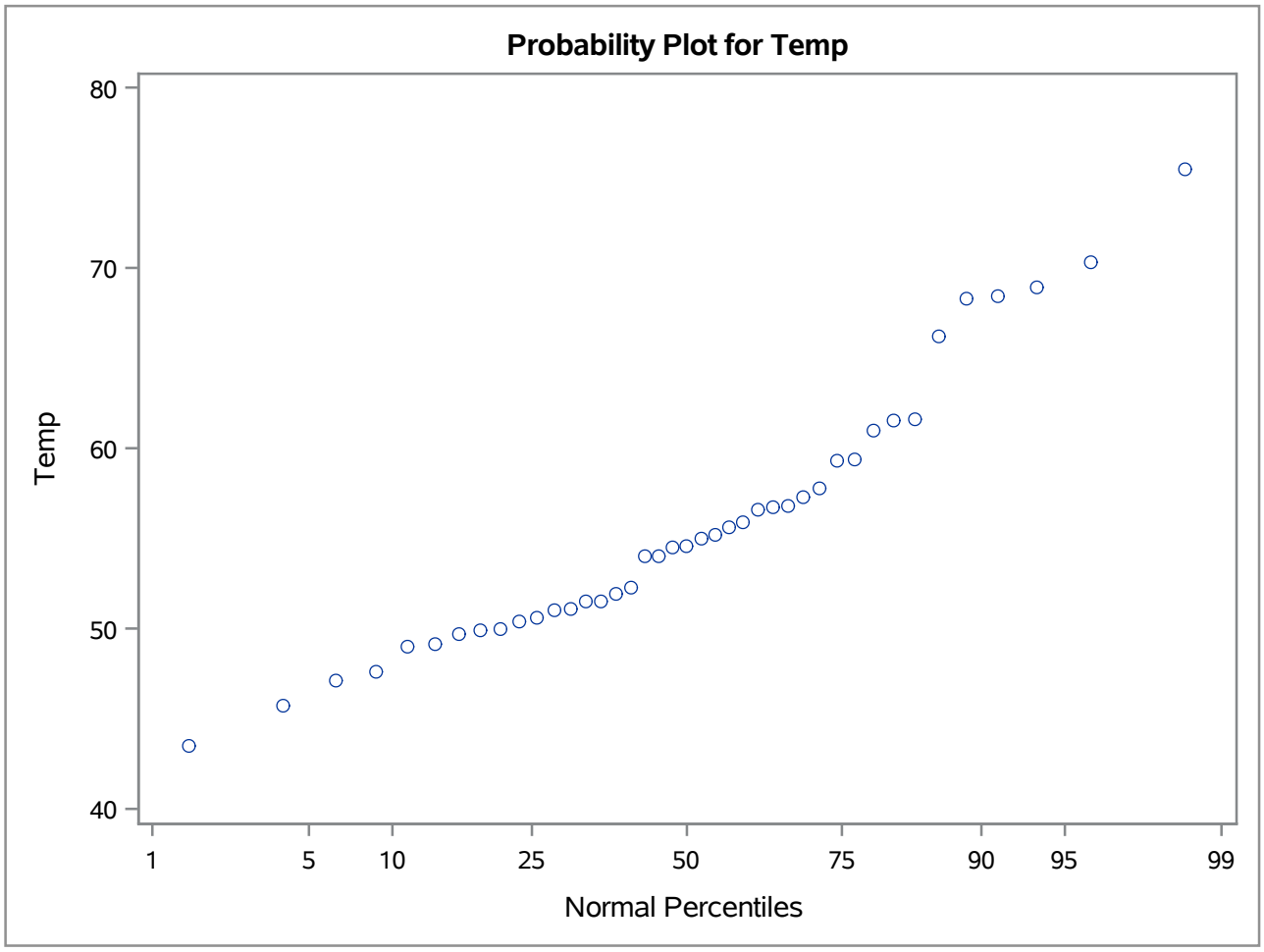
The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Man

Moments			
N	41	**Sum Weights**	41
Mean	463.097561	**Sum Observations**	18987
Std Deviation	563.473948	**Variance**	317502.89
Skewness	3.75488343	**Kurtosis**	17.403406
Uncorrected SS	21492949	**Corrected SS**	12700115.6
Coeff Variation	121.674998	**Std Error Mean**	87.9998462

Basic Statistical Measures			
Location		**Variability**	
Mean	463.0976	**Std Deviation**	563.47395
Median	347.0000	**Variance**	317503
Mode	.	**Range**	3309
		Interquartile Range	281.00000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	5.262481	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.605483	**Pr < W**	<0.0001
Kolmogorov-Smirnov	**D**	0.256875	**Pr > D**	<0.0100
Cramer-von Mises	**W-Sq**	0.759786	**Pr > W-Sq**	<0.0050
Anderson-Darling	**A-Sq**	4.292461	**Pr > A-Sq**	<0.0050

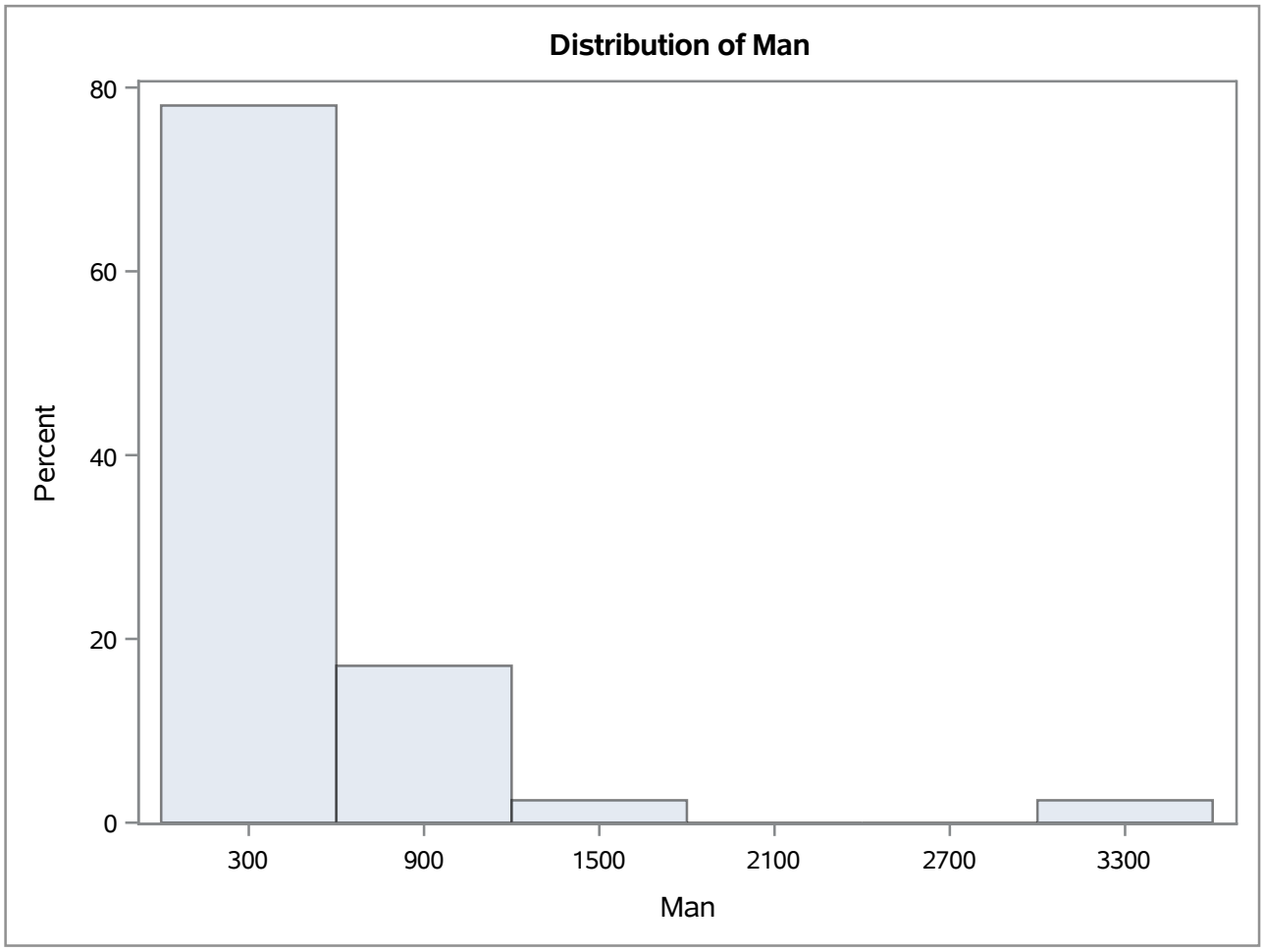
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	3344
99%	3344
95%	1064
90%	775
75% Q3	462
50% Median	347
25% Q1	181

The UNIVARIATE Procedure
Variable: Man

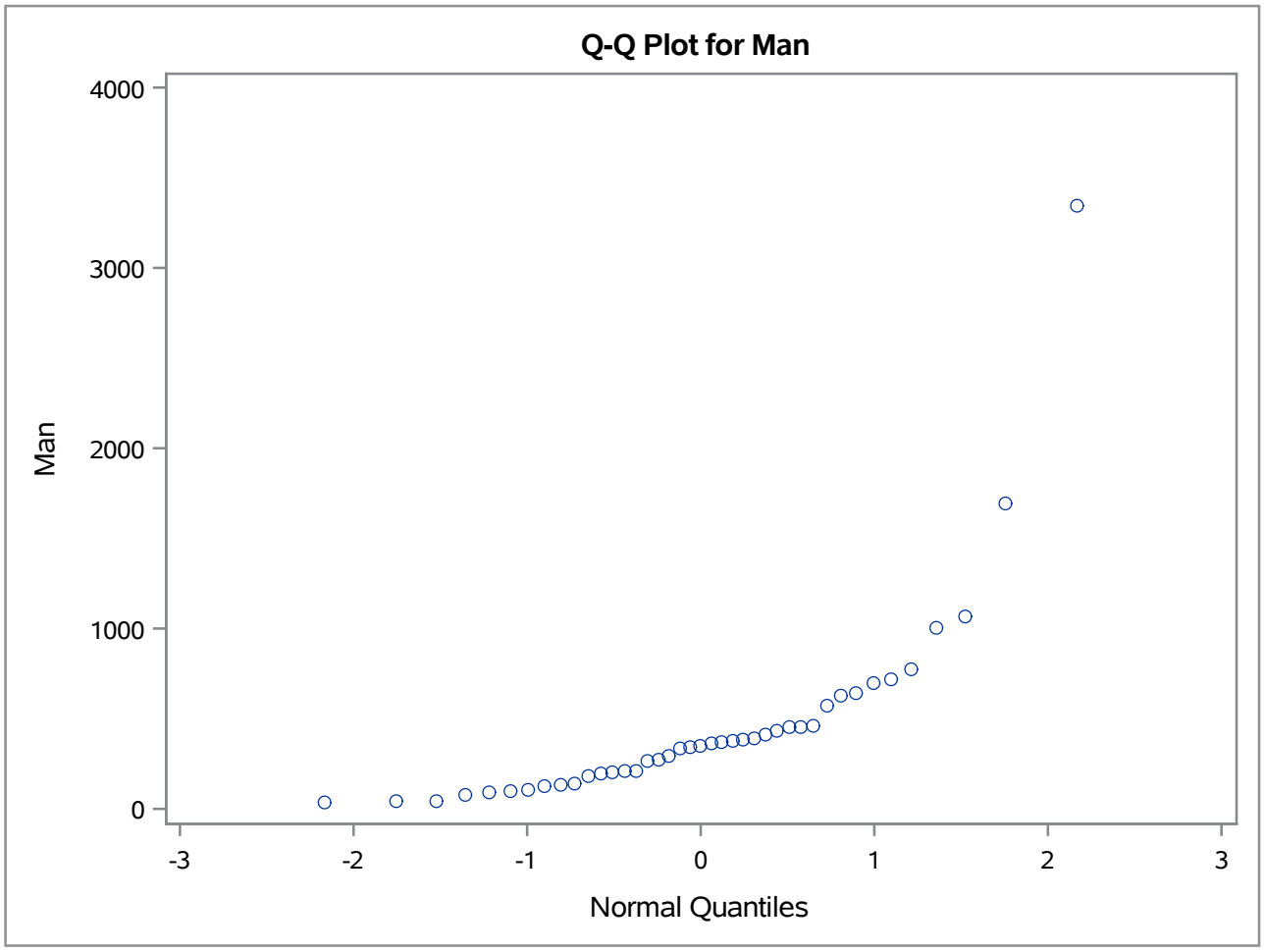
Quantiles (Definition 5)	
Level	**Quantile**
10%	91
5%	46
1%	35
0% Min	35

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
35	Charleston	40	775	St. Louis	21
44	Albany	24	1007	Cleveland	27
46	Albuquerque	23	1064	Detroit	18
80	Wilmington	6	1692	Philadelphia	29
91	Little Rock	2	3344	Chicago	11

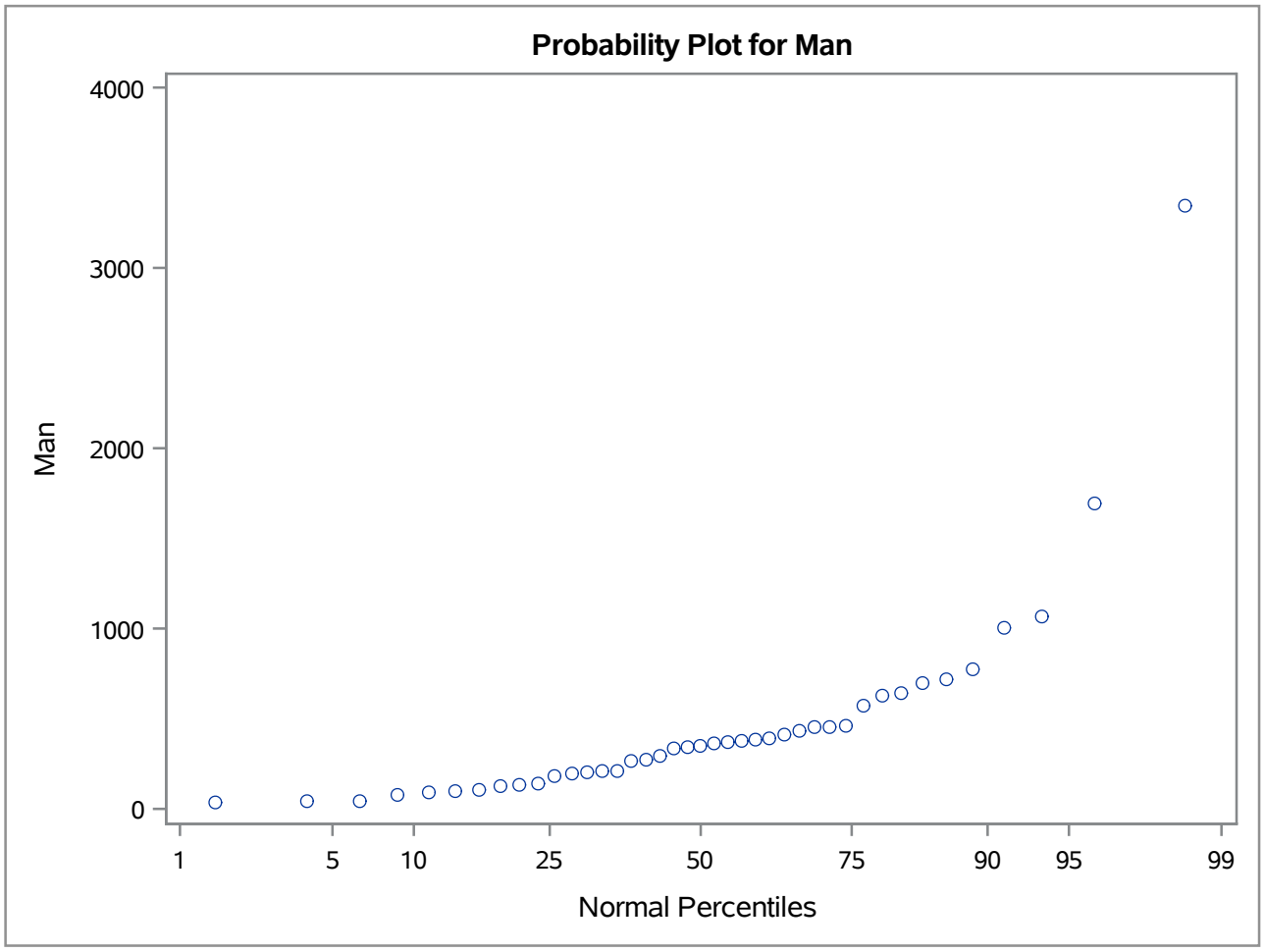
The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Pop

Moments			
N	41	**Sum Weights**	41
Mean	608.609756	**Sum Observations**	24953
Std Deviation	579.113023	**Variance**	335371.894
Skewness	3.16939401	**Kurtosis**	12.9301083
Uncorrected SS	28601515	**Corrected SS**	13414875.8
Coeff Variation	95.1534243	**Std Error Mean**	90.4422594

Basic Statistical Measures			
Location		**Variability**	
Mean	608.6098	**Std Deviation**	579.11302
Median	515.0000	**Variance**	335372
Mode	.	**Range**	3298
		Interquartile Range	418.00000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	6.729263	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.680492	**Pr < W**	<0.0001
Kolmogorov-Smirnov	**D**	0.252542	**Pr > D**	<0.0100
Cramer-von Mises	**W-Sq**	0.599265	**Pr > W-Sq**	<0.0050
Anderson-Darling	**A-Sq**	3.429159	**Pr > A-Sq**	<0.0050

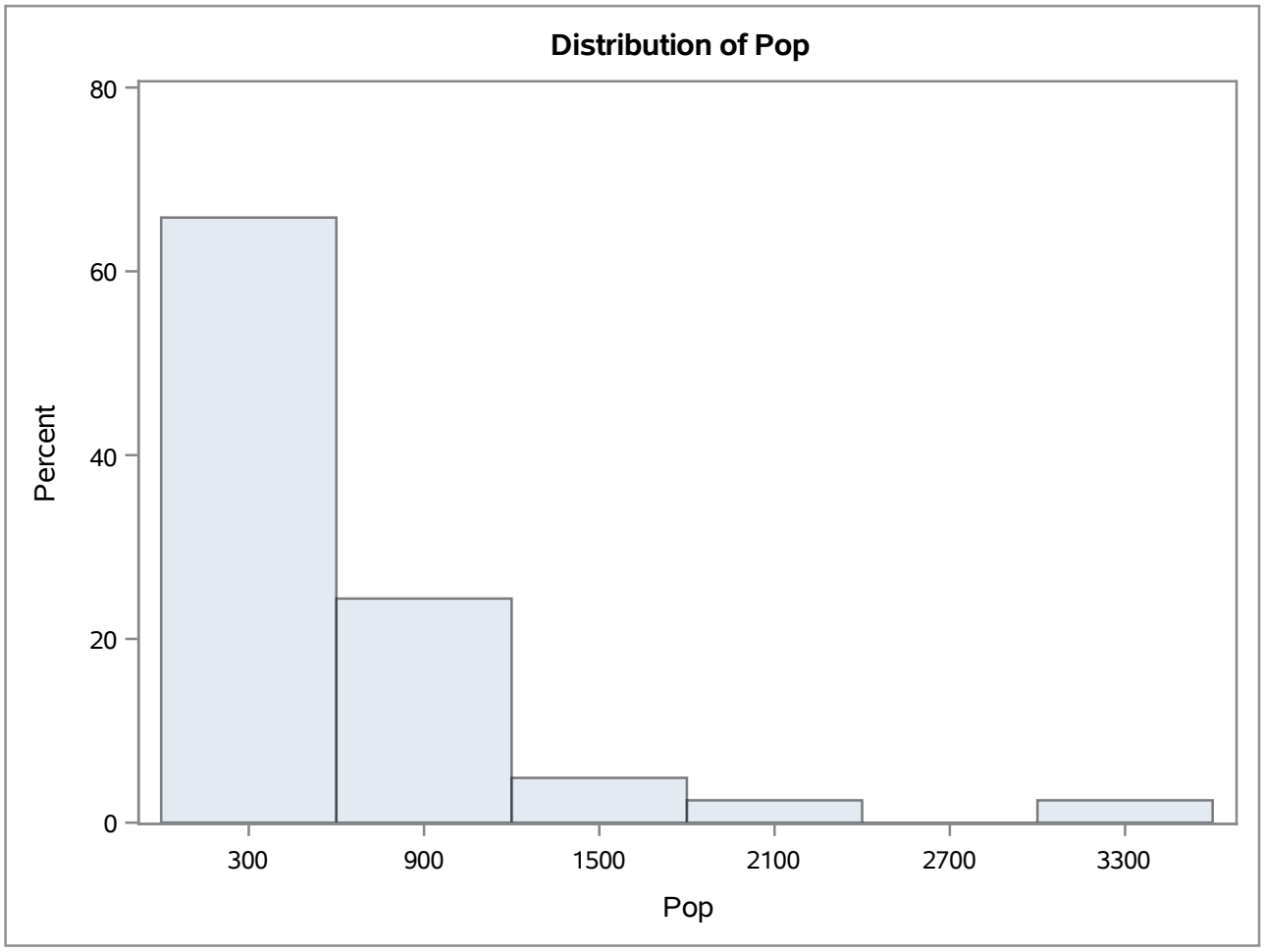
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	3369
99%	3369
95%	1513
90%	905
75% Q3	717
50% Median	515
25% Q1	299

The UNIVARIATE Procedure
Variable: Pop

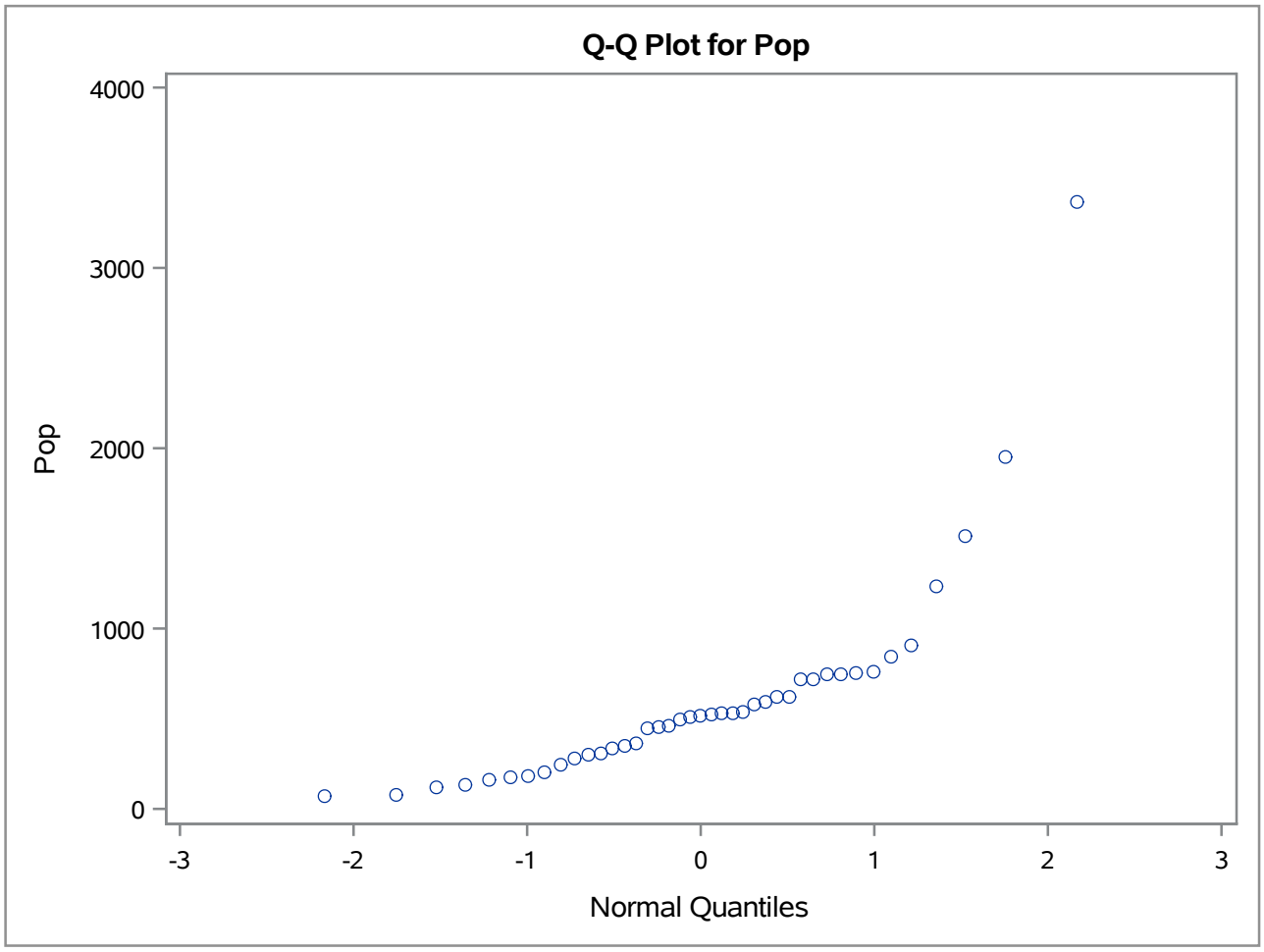
Quantiles (Definition 5)	
Level	**Quantile**
10%	158
5%	116
1%	71
0% Min	71

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
71	Charleston	40	905	Baltimore	17
80	Wilmington	6	1233	Houston	35
116	Albany	24	1513	Detroit	18
132	Little Rock	2	1950	Philadelphia	29
158	Hartford	5	3369	Chicago	11

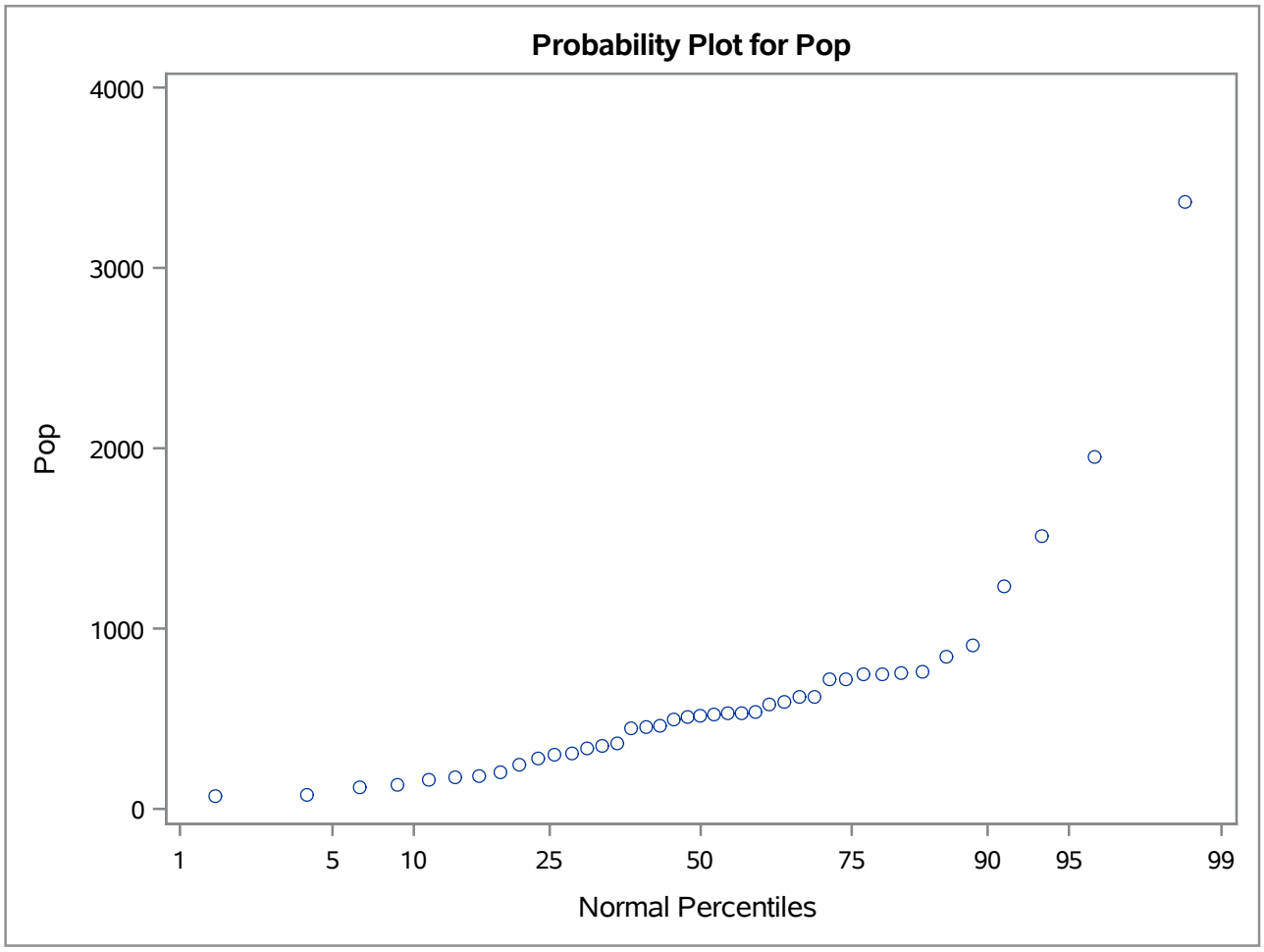
The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Wind

Moments			
N	41	**Sum Weights**	41
Mean	9.44390244	**Sum Observations**	387.2
Std Deviation	1.42864425	**Variance**	2.04102439
Skewness	0.00288263	**Kurtosis**	0.40575232
Uncorrected SS	3738.32	**Corrected SS**	81.6409756
Coeff Variation	15.1276896	**Std Error Mean**	0.22311675

Basic Statistical Measures			
Location		**Variability**	
Mean	9.443902	**Std Deviation**	1.42864
Median	9.300000	**Variance**	2.04102
Mode	9.000000	**Range**	6.70000
		Interquartile Range	1.90000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	42.32718	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.980574	**Pr < W**	0.6973
Kolmogorov-Smirnov	**D**	0.090643	**Pr > D**	>0.1500
Cramer-von Mises	**W-Sq**	0.067062	**Pr > W-Sq**	>0.2500
Anderson-Darling	**A-Sq**	0.378436	**Pr > A-Sq**	>0.2500

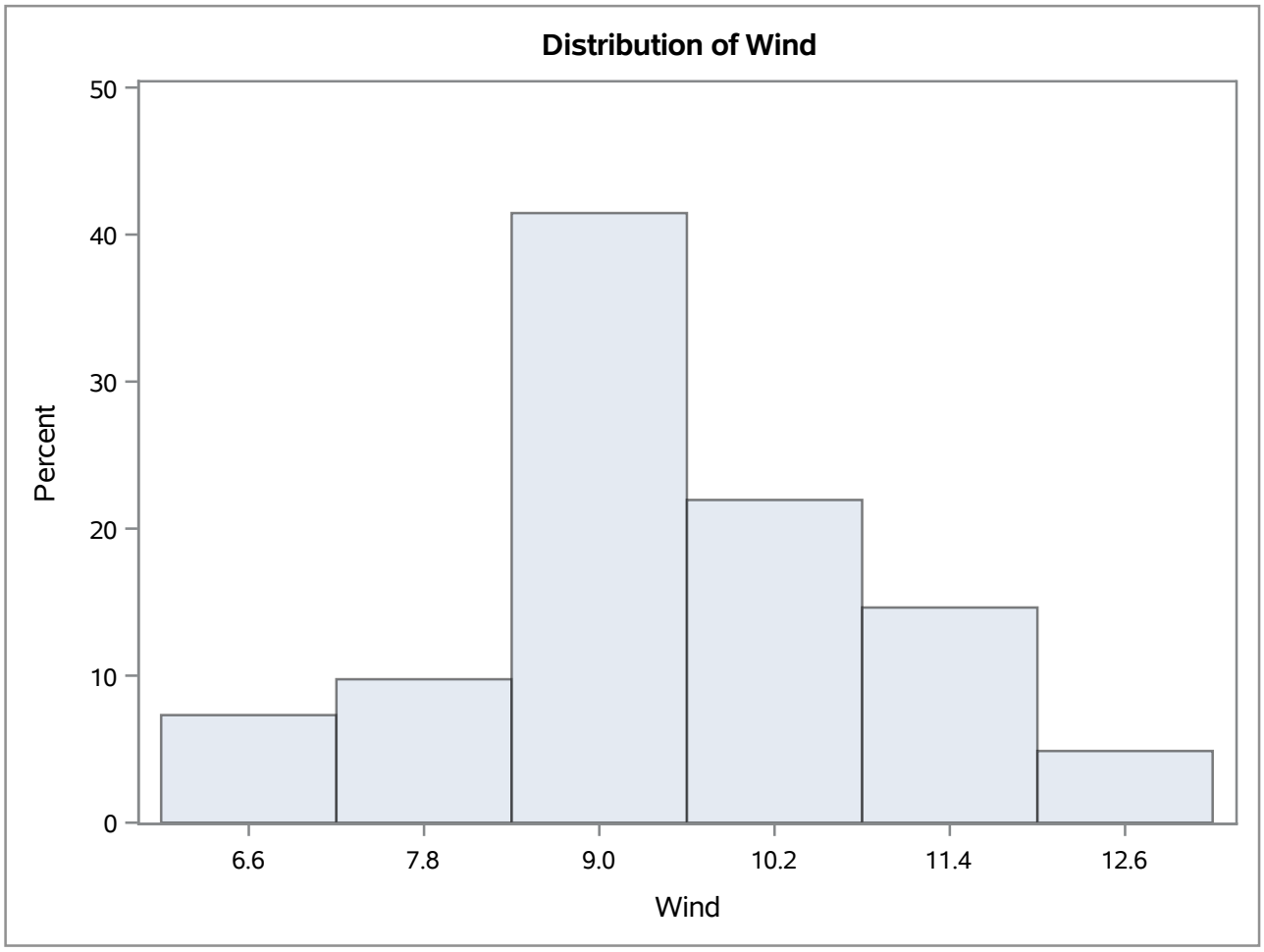
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	12.7
99%	12.7
95%	11.8
90%	10.9
75% Q3	10.6
50% Median	9.3
25% Q1	8.7

The UNIVARIATE Procedure
Variable: Wind

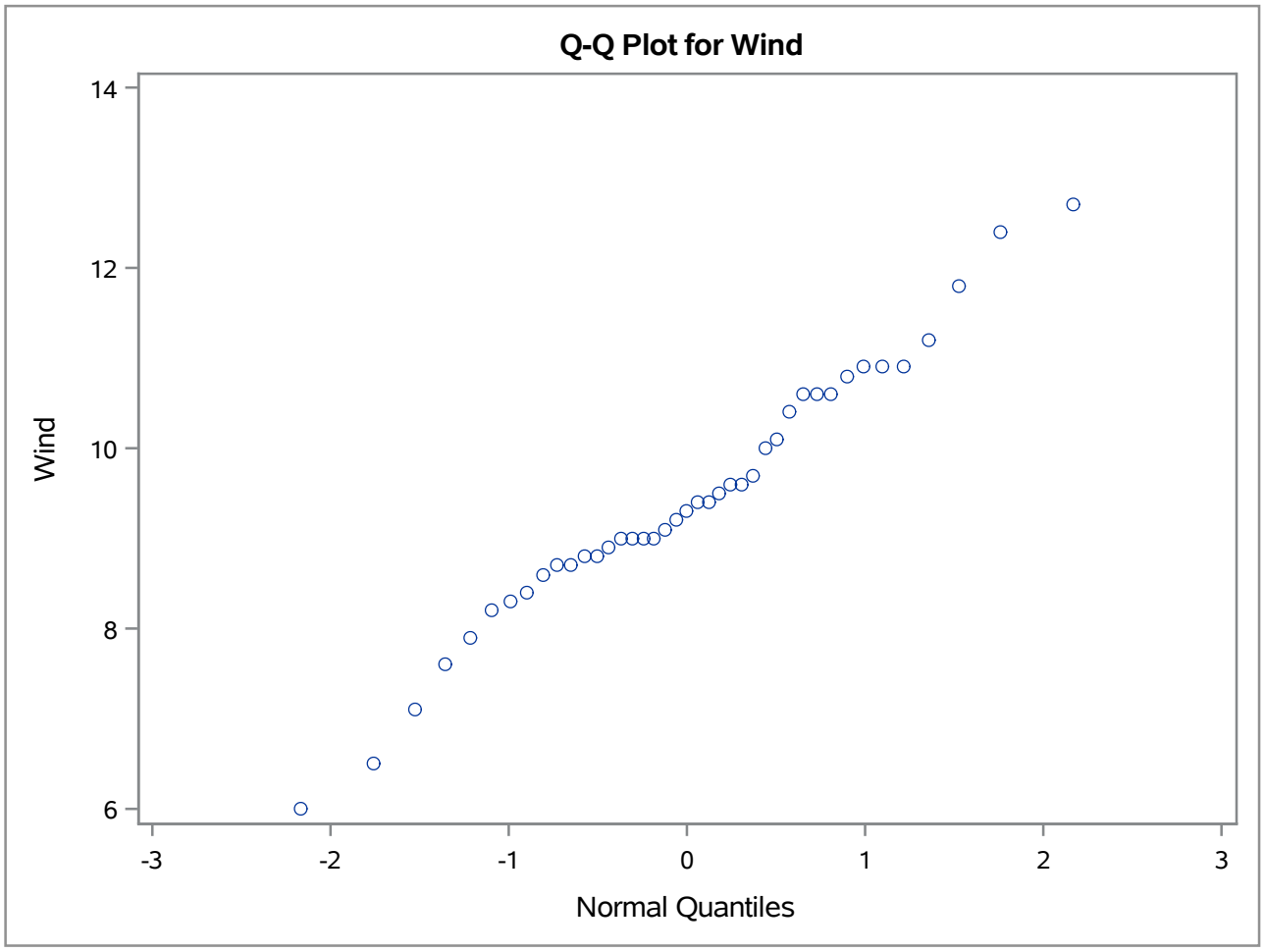
Quantiles (Definition 5)	
Level	**Quantile**
10%	7.9
5%	7.1
1%	6.0
0% Min	6.0

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
6.0	Phoenix	1	10.9	Dallas	34
6.5	Charleston	40	11.2	Des Moines	13
7.1	Cincinnati	26	11.8	Milwaukee	41
7.6	Richmond	38	12.4	Buffalo	25
7.9	Nashville	33	12.7	Wichita	14

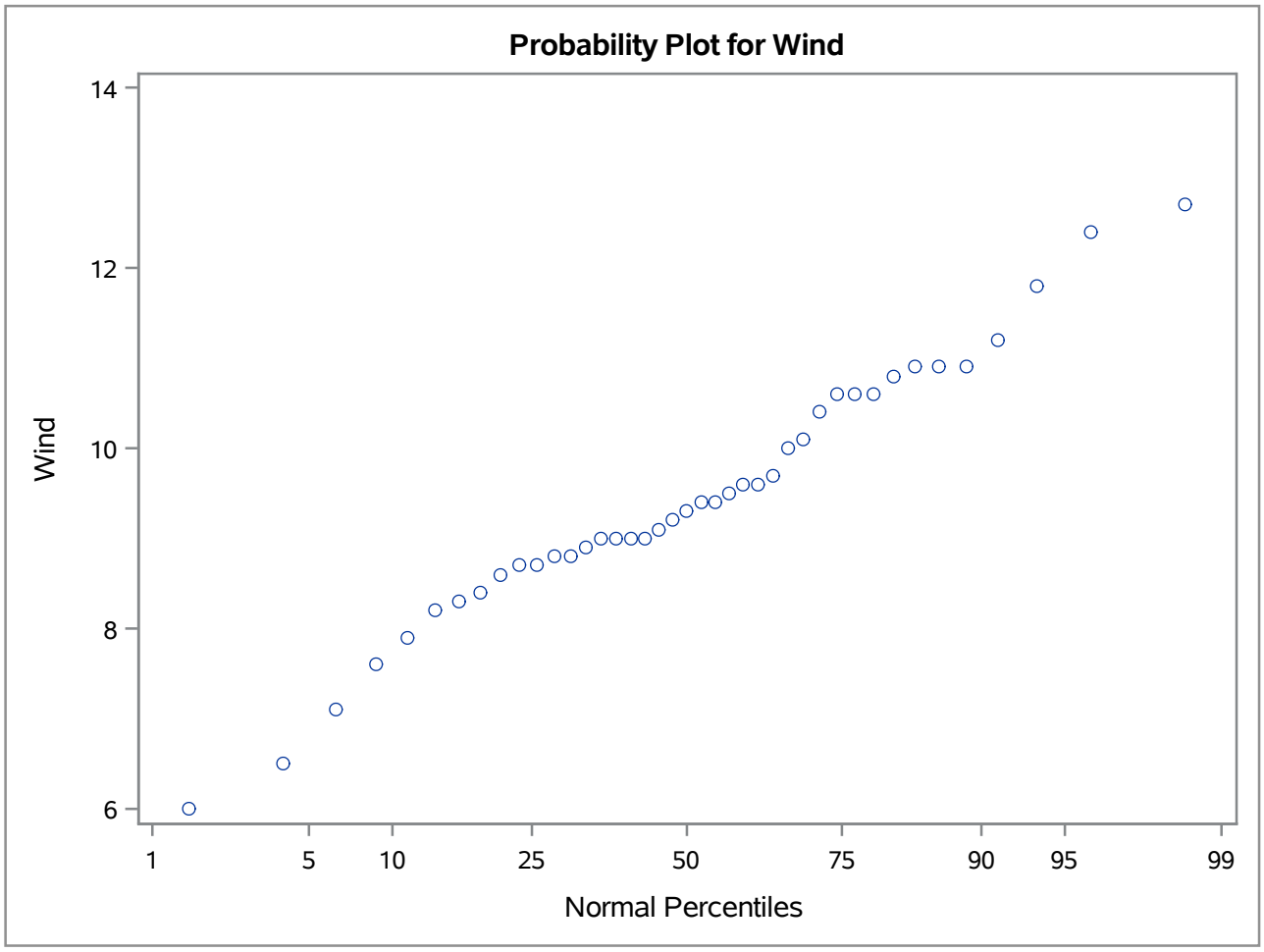
The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: Rain

Moments			
N	41	**Sum Weights**	41
Mean	36.7690244	**Sum Observations**	1507.53
Std Deviation	11.7715498	**Variance**	138.569384
Skewness	-0.7462327	**Kurtosis**	0.92457953
Uncorrected SS	60973.1827	**Corrected SS**	5542.77536
Coeff Variation	32.0148548	**Std Error Mean**	1.83840721

Basic Statistical Measures			
Location		**Variability**	
Mean	36.76902	**Std Deviation**	11.77155
Median	38.74000	**Variance**	138.56938
Mode	.	**Range**	52.75000
		Interquartile Range	12.15000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	20.00048	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.942144	**Pr < W**	0.0373
Kolmogorov-Smirnov	**D**	0.128898	**Pr > D**	0.0854
Cramer-von Mises	**W-Sq**	0.143302	**Pr > W-Sq**	0.0284
Anderson-Darling	**A-Sq**	0.874221	**Pr > A-Sq**	0.0233

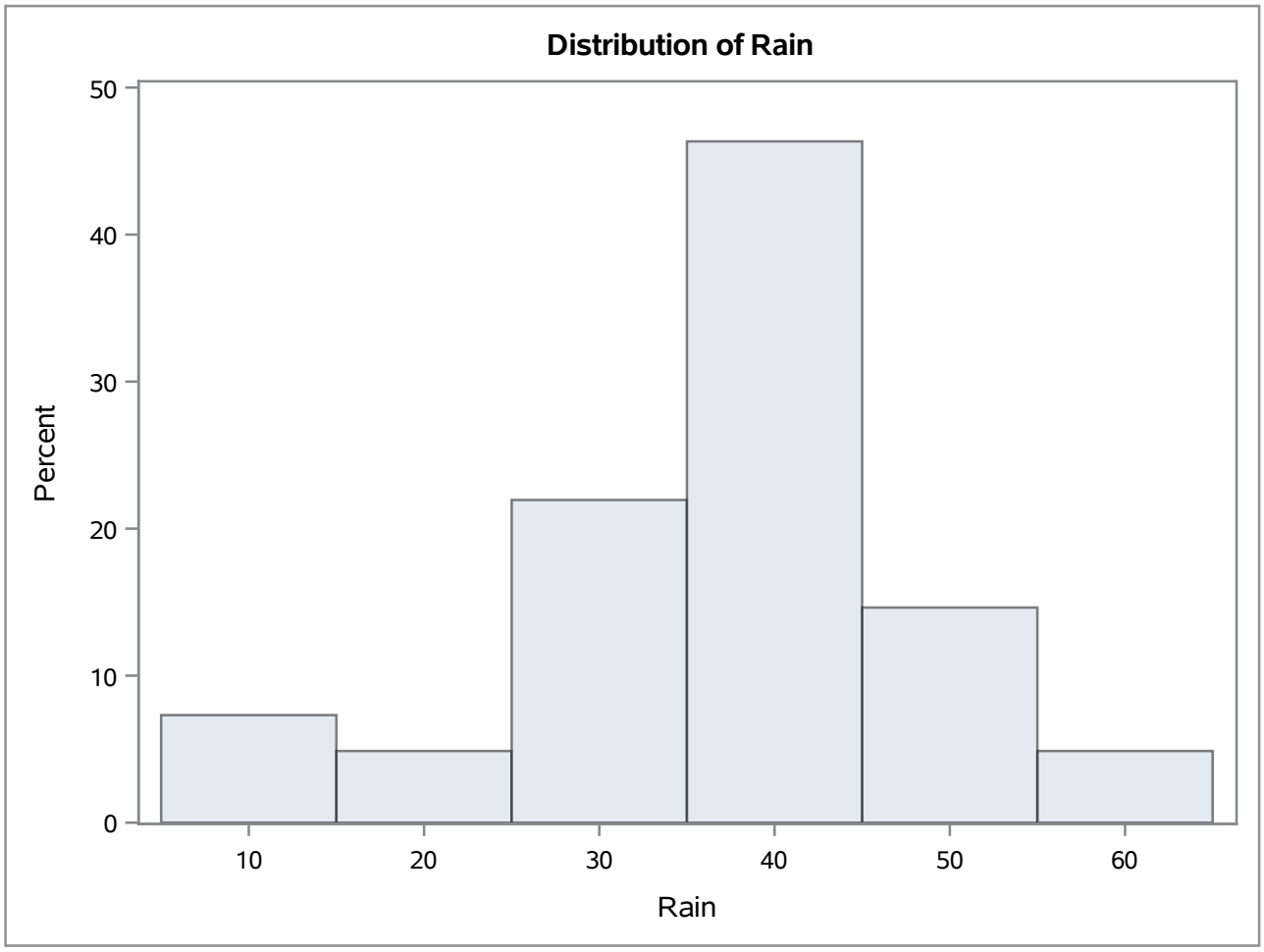
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	59.80
99%	59.80
95%	54.47
90%	48.52
75% Q3	43.11
50% Median	38.74
25% Q1	30.96

The UNIVARIATE Procedure
Variable: Rain

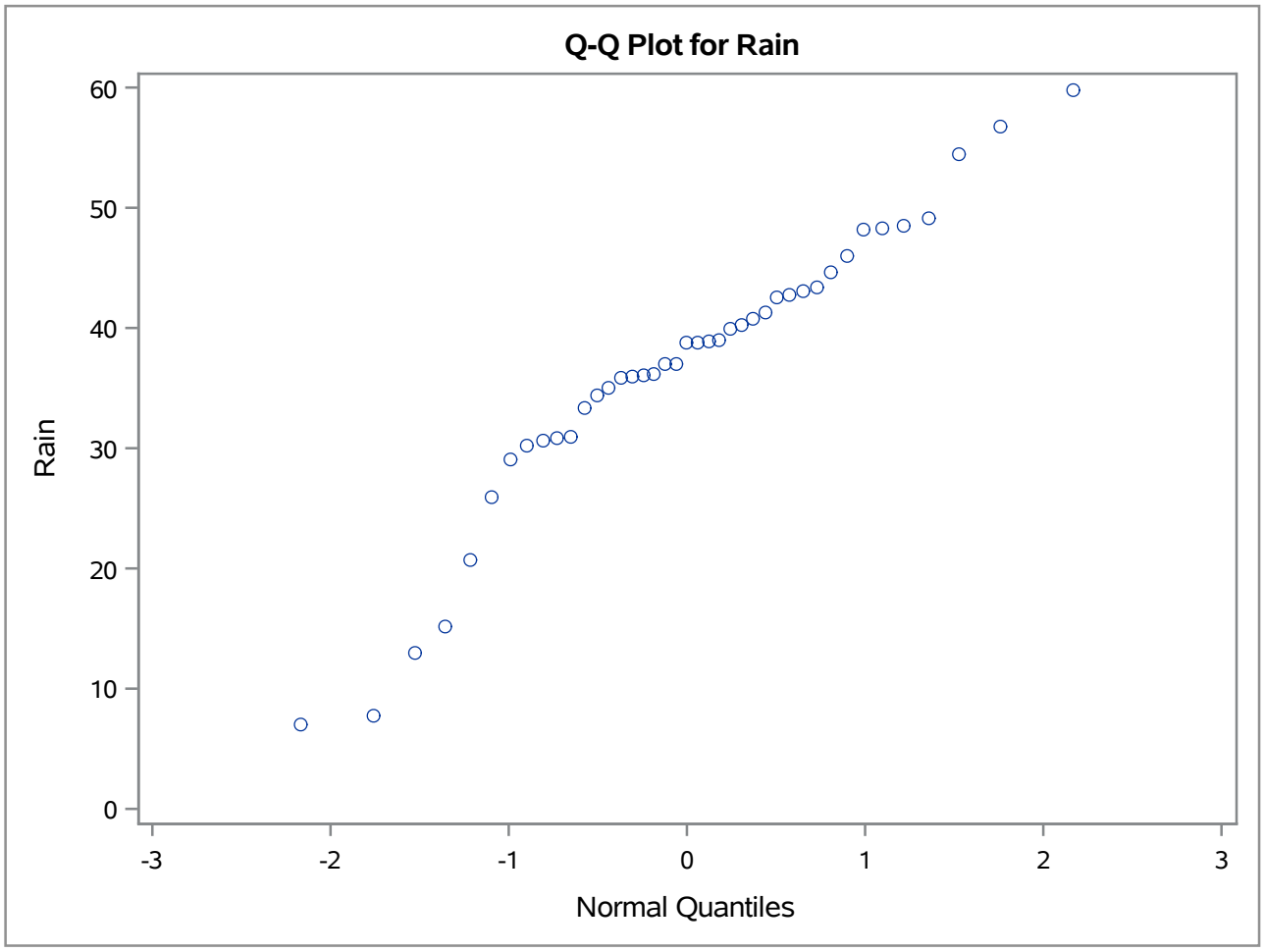
Quantiles (Definition 5)	
Level	**Quantile**
10%	20.66
5%	12.95
1%	7.05
0% Min	7.05

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
7.05	Phoenix	1	48.52	Little Rock	2
7.77	Albuquerque	23	49.10	Memphis	32
12.95	Denver	4	54.47	Jacksonville	8
15.17	Salt Lake Cit	36	56.77	New Orleans	16
20.66	San Francisco	3	59.80	Miami	9

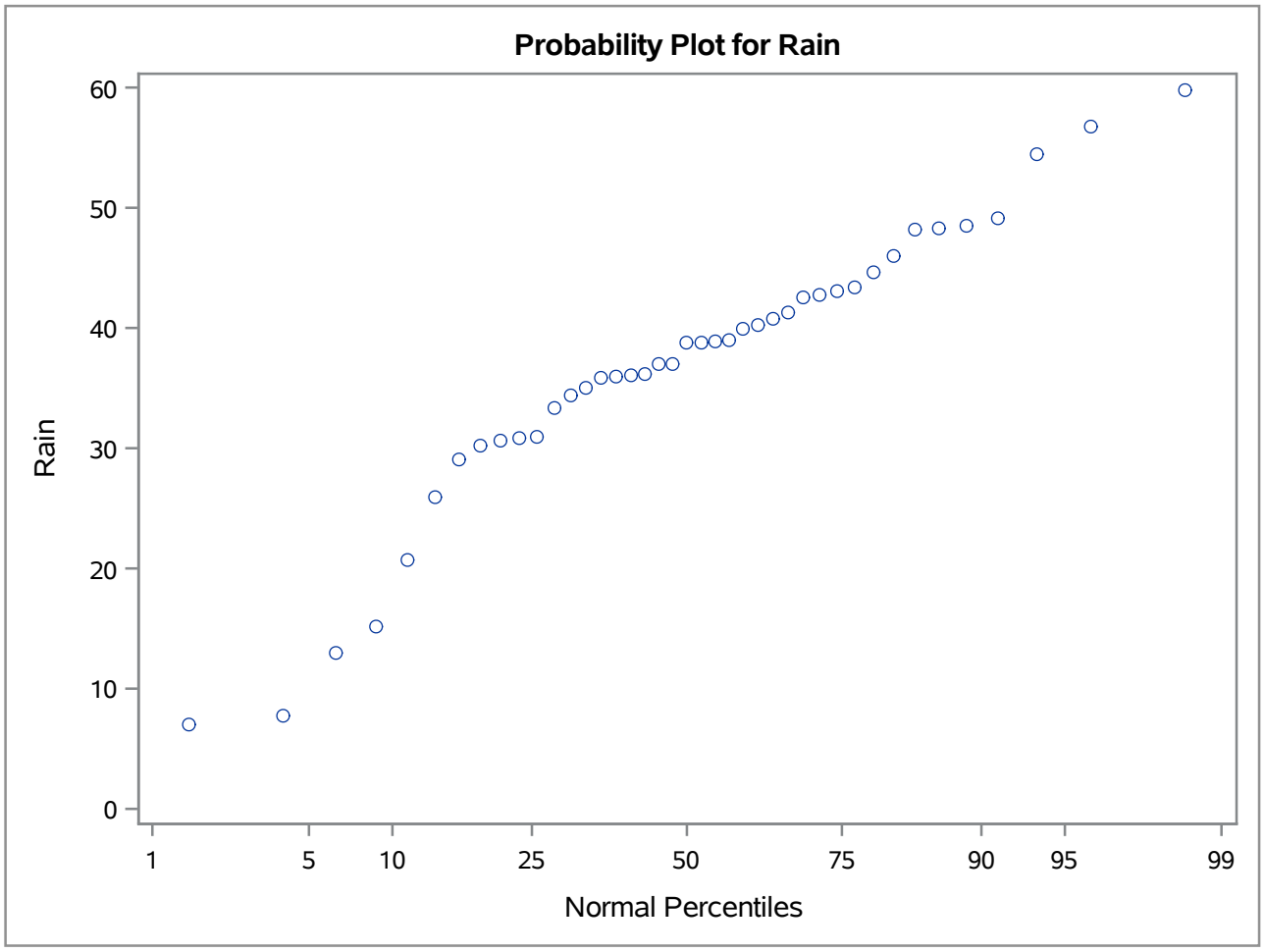
The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: RainDays

Moments			
N	41	**Sum Weights**	41
Mean	113.902439	**Sum Observations**	4670
Std Deviation	26.5064189	**Variance**	702.590244
Skewness	-0.5927597	**Kurtosis**	1.19202805
Uncorrected SS	560028	**Corrected SS**	28103.6098
Coeff Variation	23.2711601	**Std Error Mean**	4.13960716

Basic Statistical Measures			
Location		**Variability**	
Mean	113.9024	**Std Deviation**	26.50642
Median	115.0000	**Variance**	702.59024
Mode	115.0000	**Range**	130.00000
		Interquartile Range	25.00000

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	27.51528	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.965399	**Pr < W**	0.2419
Kolmogorov-Smirnov	**D**	0.11494	**Pr > D**	>0.1500
Cramer-von Mises	**W-Sq**	0.092976	**Pr > W-Sq**	0.1380
Anderson-Darling	**A-Sq**	0.517496	**Pr > A-Sq**	0.1866

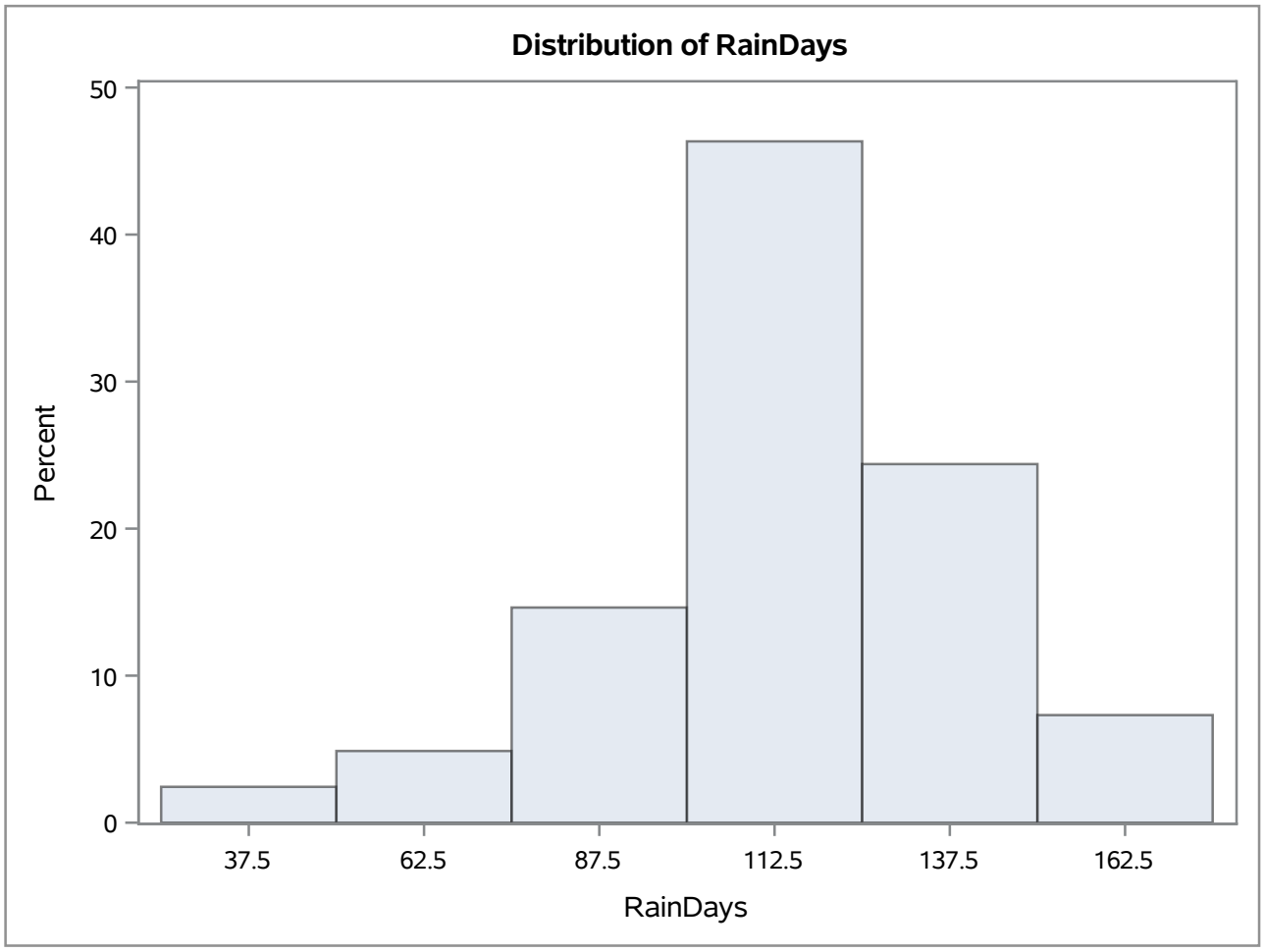
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	166
99%	166
95%	155
90%	147
75% Q3	128
50% Median	115
25% Q1	103

The UNIVARIATE Procedure
Variable: RainDays

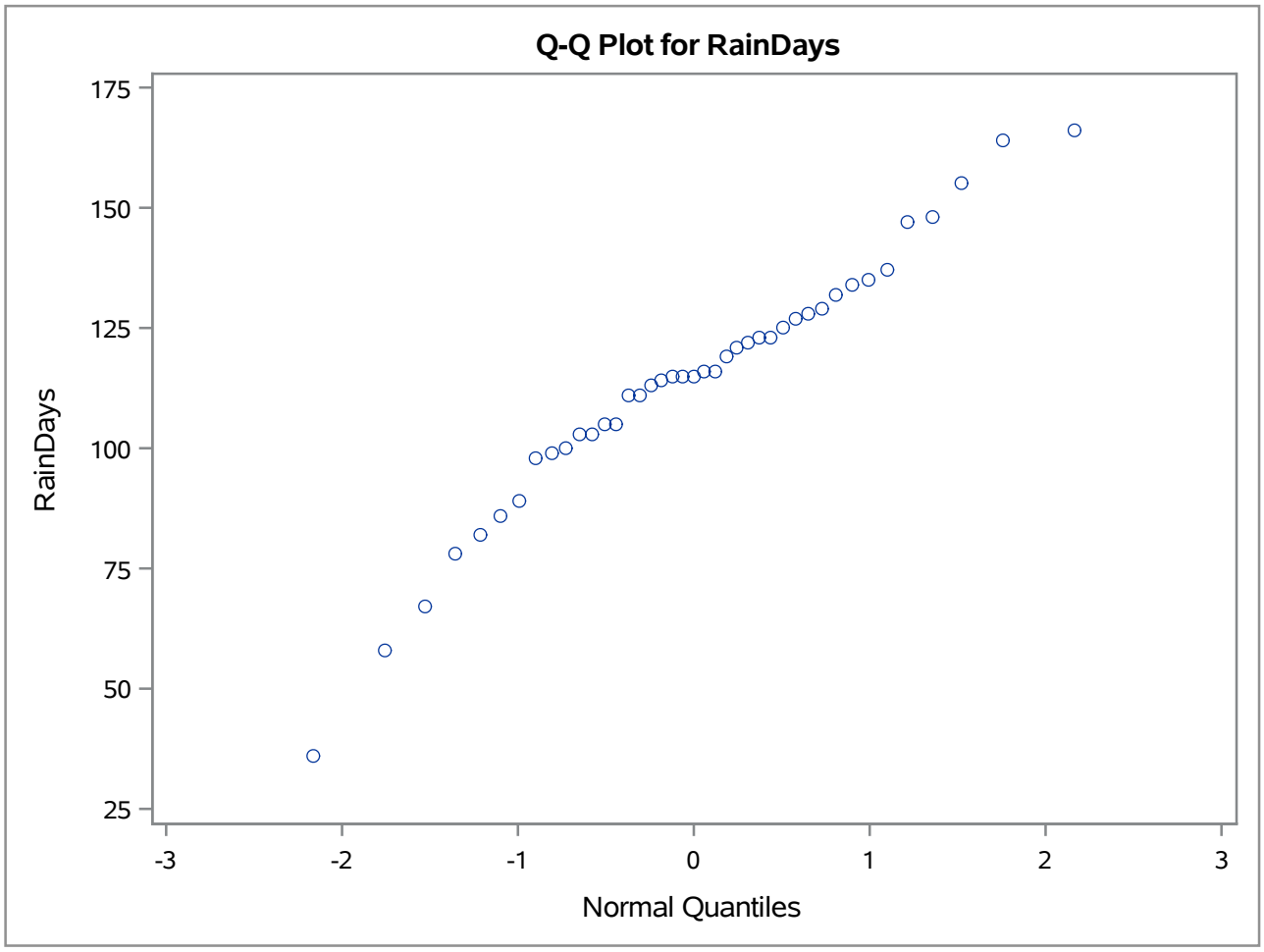
Quantiles (Definition 5)	
Level	**Quantile**
10%	82
5%	67
1%	36
0% Min	36

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
36	Phoenix	1	147	Pittsburgh	30
58	Albuquerque	23	148	Charleston	40
67	San Francisco	3	155	Cleveland	27
78	Dallas	34	164	Seattle	39
82	Wichita	14	166	Buffalo	25

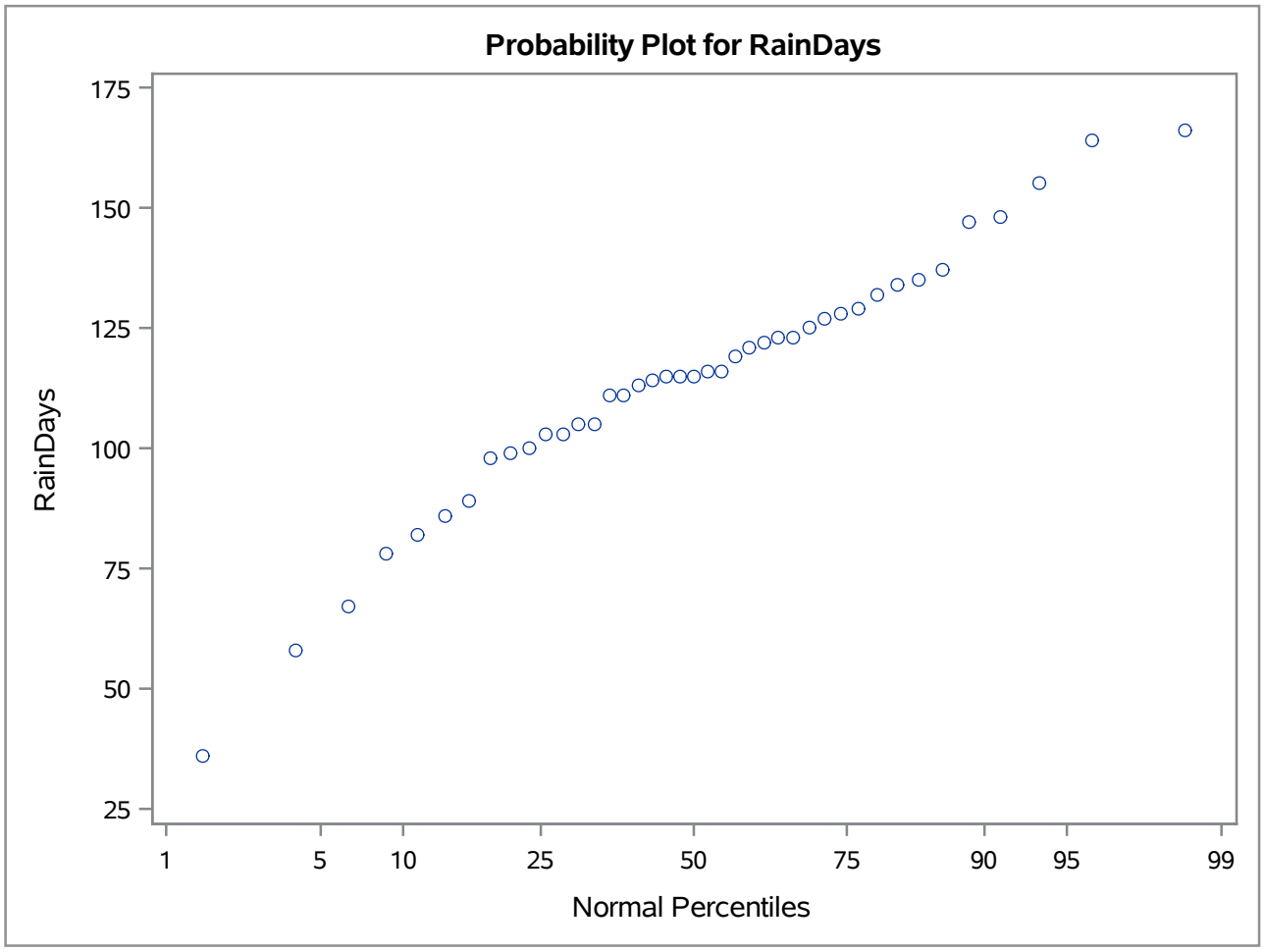
The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: logSO2

Moments			
N	41	**Sum Weights**	41
Mean	3.15300362	**Sum Observations**	129.273148
Std Deviation	0.70229854	**Variance**	0.49322323
Skewness	0.33928545	**Kurtosis**	-0.7587872
Uncorrected SS	427.327634	**Corrected SS**	19.7289293
Coeff Variation	22.2739527	**Std Error Mean**	0.1096806

Basic Statistical Measures			
Location		**Variability**	
Mean	3.153004	**Std Deviation**	0.70230
Median	3.258097	**Variance**	0.49322
Mode	2.302585	**Range**	2.62104
		Interquartile Range	0.99040

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	28.74714	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.953987	**Pr < W**	0.0967
Kolmogorov-Smirnov	**D**	0.10932	**Pr > D**	>0.1500
Cramer-von Mises	**W-Sq**	0.086488	**Pr > W-Sq**	0.1703
Anderson-Darling	**A-Sq**	0.577728	**Pr > A-Sq**	0.1300

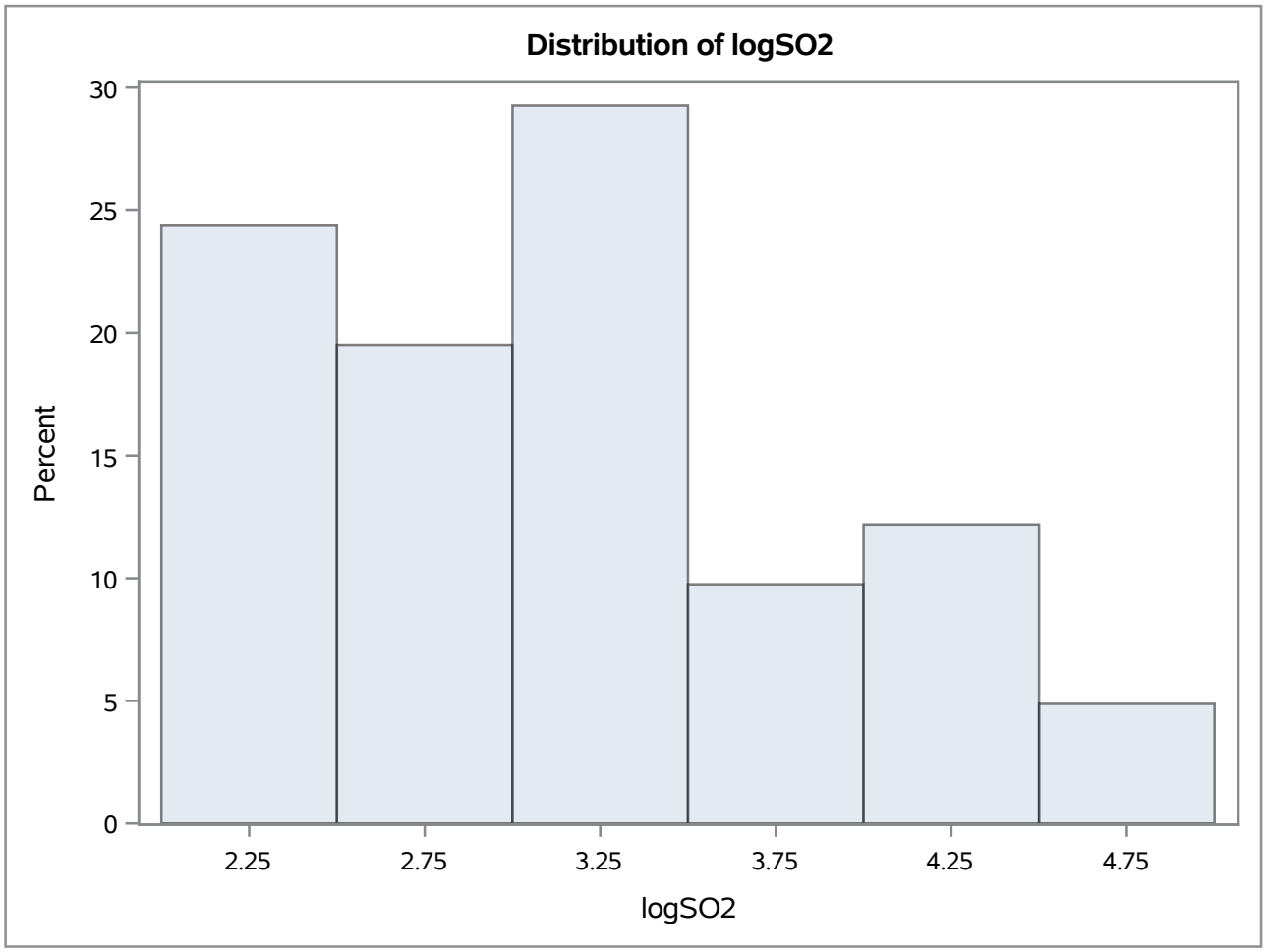
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	4.70048
99%	4.70048
95%	4.23411
90%	4.11087
75% Q3	3.55535
50% Median	3.25810
25% Q1	2.56495

The UNIVARIATE Procedure
Variable: logSO2

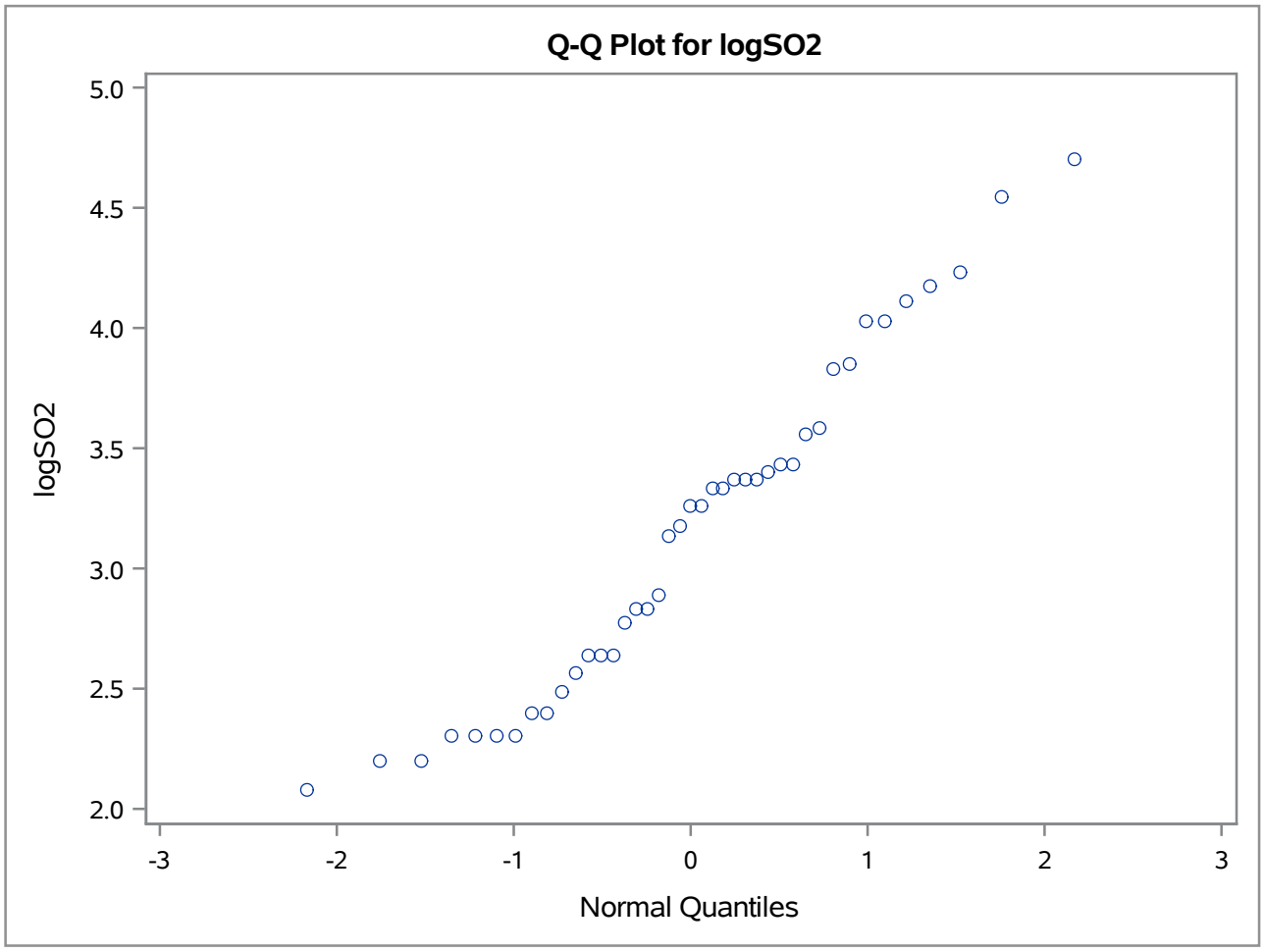
Quantiles (Definition 5)	
Level	**Quantile**
10%	2.30259
5%	2.19722
1%	2.07944
0% Min	2.07944

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
2.07944	Wichita	14	4.11087	Pittsburgh	30
2.19722	Dallas	34	4.17439	Cleveland	27
2.19722	New Orleans	16	4.23411	Philadelphia	29
2.30259	Houston	35	4.54329	Providence	31
2.30259	Memphis	32	4.70048	Chicago	11

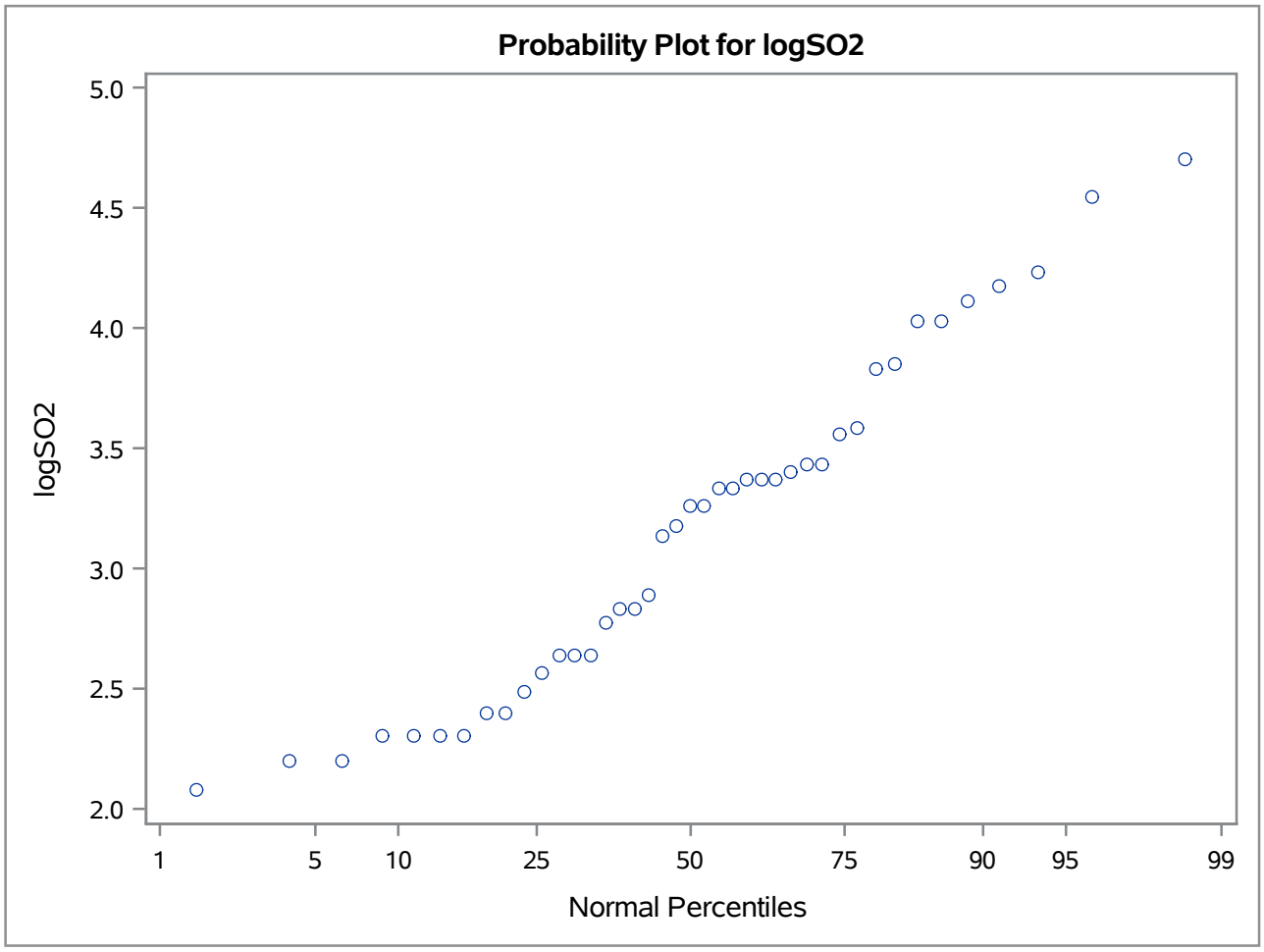
The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: logMan

Moments			
N	41	**Sum Weights**	41
Mean	5.69209429	**Sum Observations**	233.375866
Std Deviation	0.96343479	**Variance**	0.92820659
Skewness	-0.1281147	**Kurtosis**	0.36391913
Uncorrected SS	1365.5257	**Corrected SS**	37.1282637
Coeff Variation	16.9258403	**Std Error Mean**	0.15046324

Basic Statistical Measures			
Location		**Variability**	
Mean	5.692094	**Std Deviation**	0.96343
Median	5.849325	**Variance**	0.92821
Mode	.	**Range**	4.55957
		Interquartile Range	0.93707

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	37.83047	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.979971	**Pr < W**	0.6744
Kolmogorov-Smirnov	**D**	0.113818	**Pr > D**	>0.1500
Cramer-von Mises	**W-Sq**	0.070079	**Pr > W-Sq**	>0.2500
Anderson-Darling	**A-Sq**	0.384956	**Pr > A-Sq**	>0.2500

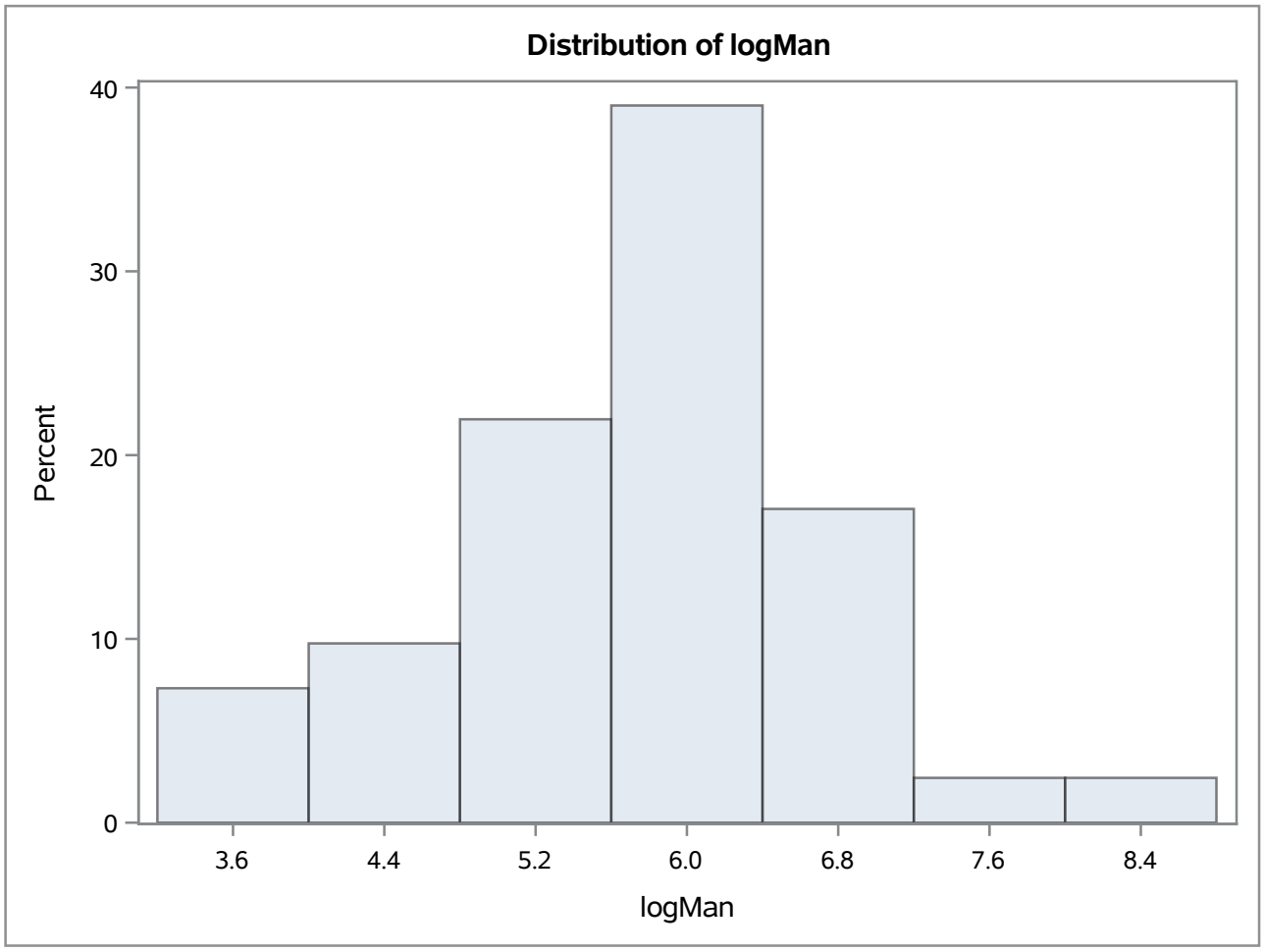
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	8.11492
99%	8.11492
95%	6.96979
90%	6.65286
75% Q3	6.13556
50% Median	5.84932
25% Q1	5.19850

The UNIVARIATE Procedure
Variable: logMan

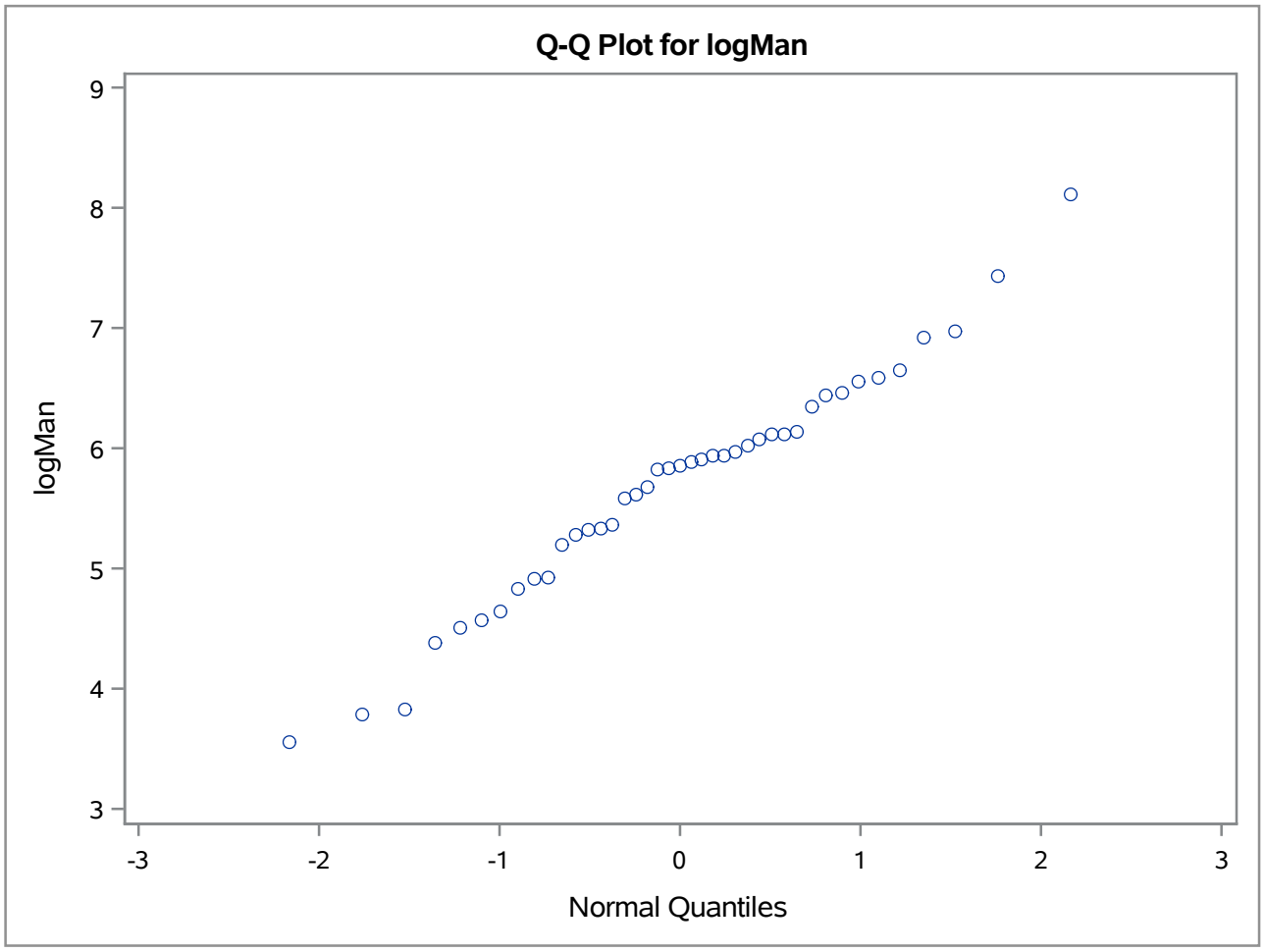
Quantiles (Definition 5)	
Level	**Quantile**
10%	4.51086
5%	3.82864
1%	3.55535
0% Min	3.55535

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
3.55535	Charleston	40	6.65286	St. Louis	21
3.78419	Albany	24	6.91473	Cleveland	27
3.82864	Albuquerque	23	6.96979	Detroit	18
4.38203	Wilmington	6	7.43367	Philadelphia	29
4.51086	Little Rock	2	8.11492	Chicago	11

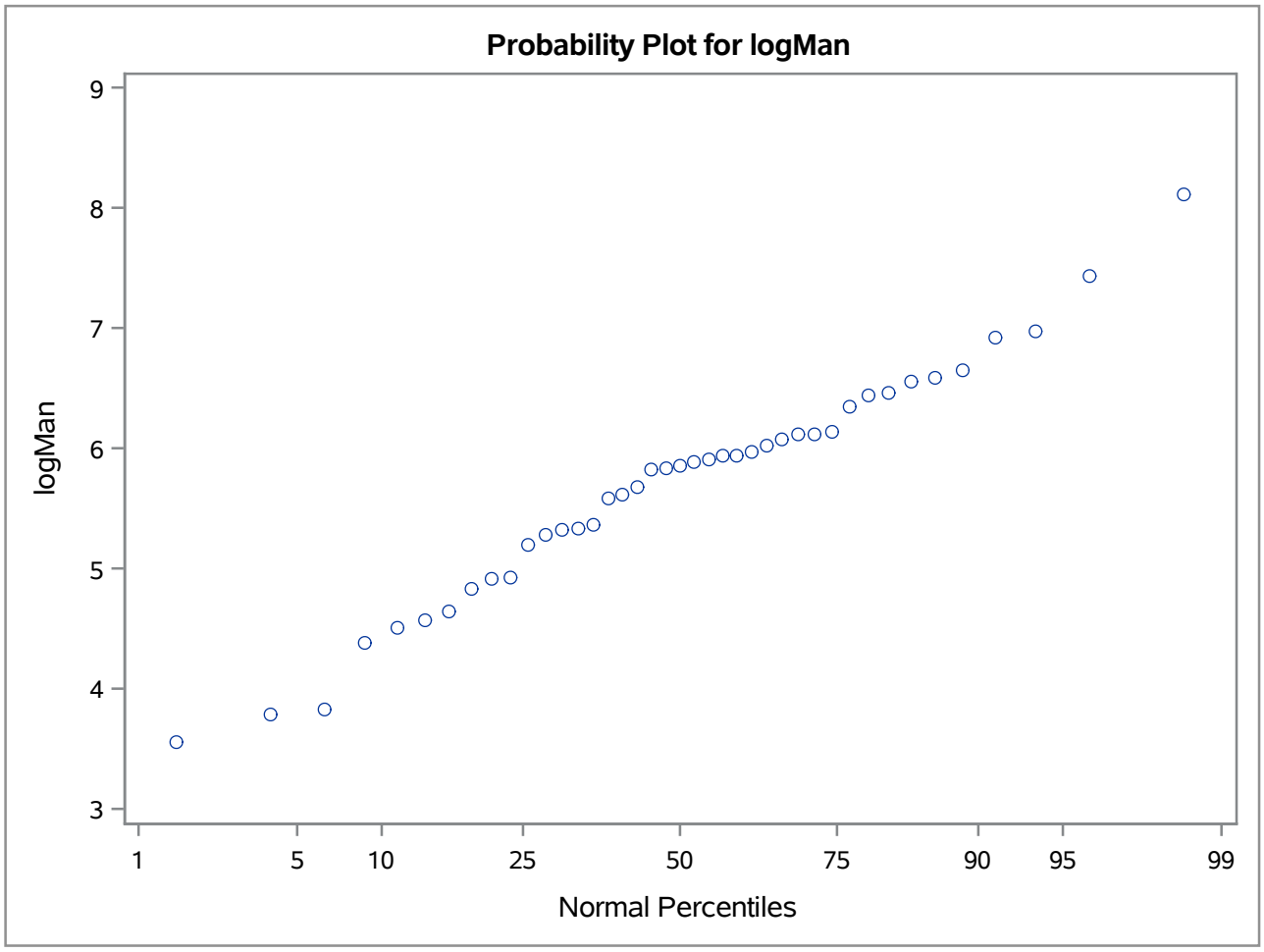
The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: logPop

Moments			
N	41	**Sum Weights**	41
Mean	6.101705	**Sum Observations**	250.169905
Std Deviation	0.80443445	**Variance**	0.64711479
Skewness	-0.1731838	**Kurtosis**	0.53974478
Uncorrected SS	1552.34755	**Corrected SS**	25.8845915
Coeff Variation	13.1837651	**Std Error Mean**	0.12563155

Basic Statistical Measures			
Location		**Variability**	
Mean	6.101705	**Std Deviation**	0.80443
Median	6.244167	**Variance**	0.64711
Mode	.	**Range**	3.85969
		Interquartile Range	0.87463

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	48.56825	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.970858	**Pr < W**	0.3676
Kolmogorov-Smirnov	**D**	0.135678	**Pr > D**	0.0563
Cramer-von Mises	**W-Sq**	0.114355	**Pr > W-Sq**	0.0733
Anderson-Darling	**A-Sq**	0.597145	**Pr > A-Sq**	0.1158

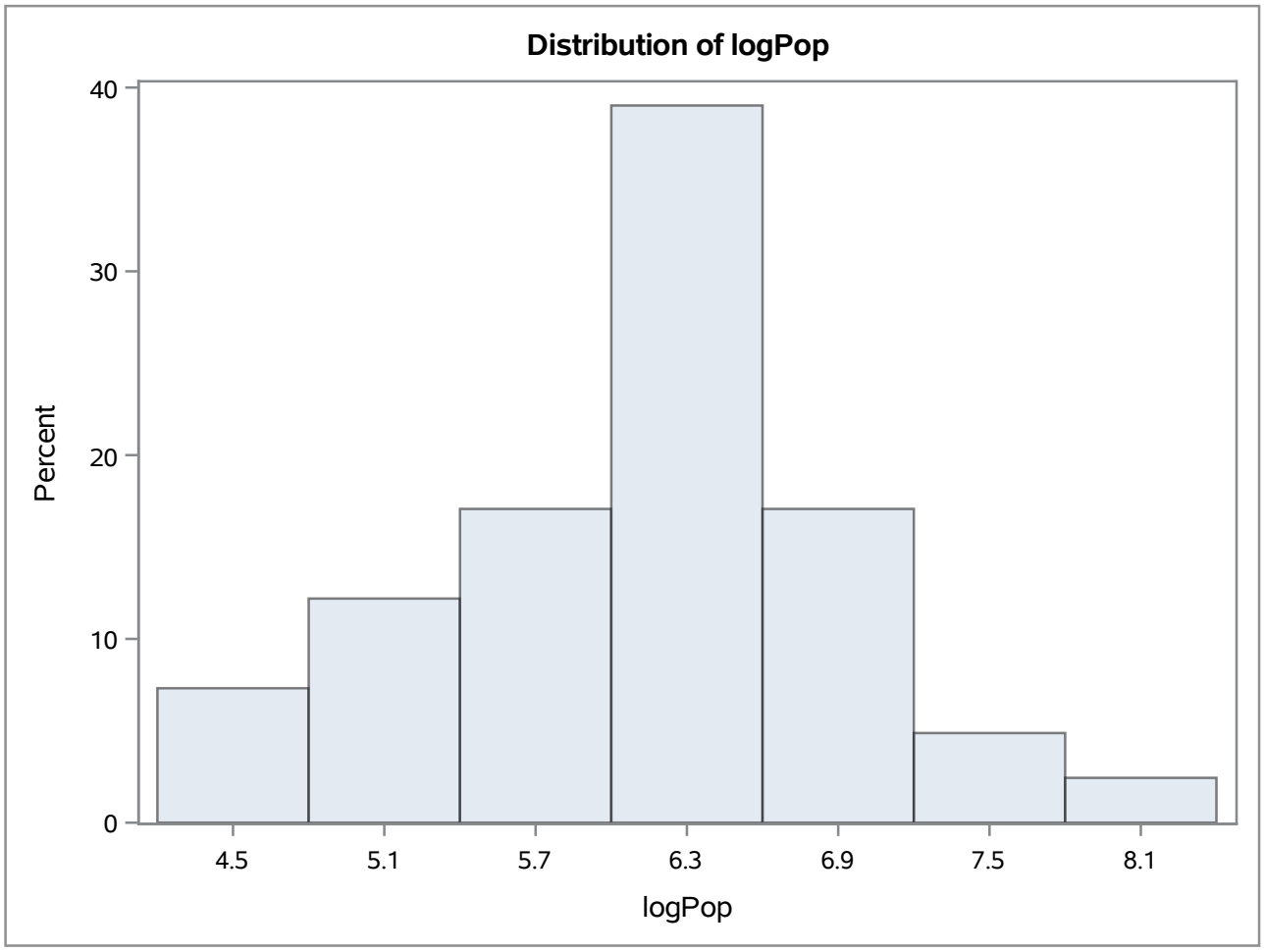
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	8.12237
99%	8.12237
95%	7.32185
90%	6.80793
75% Q3	6.57508
50% Median	6.24417
25% Q1	5.70044

The UNIVARIATE Procedure
Variable: logPop

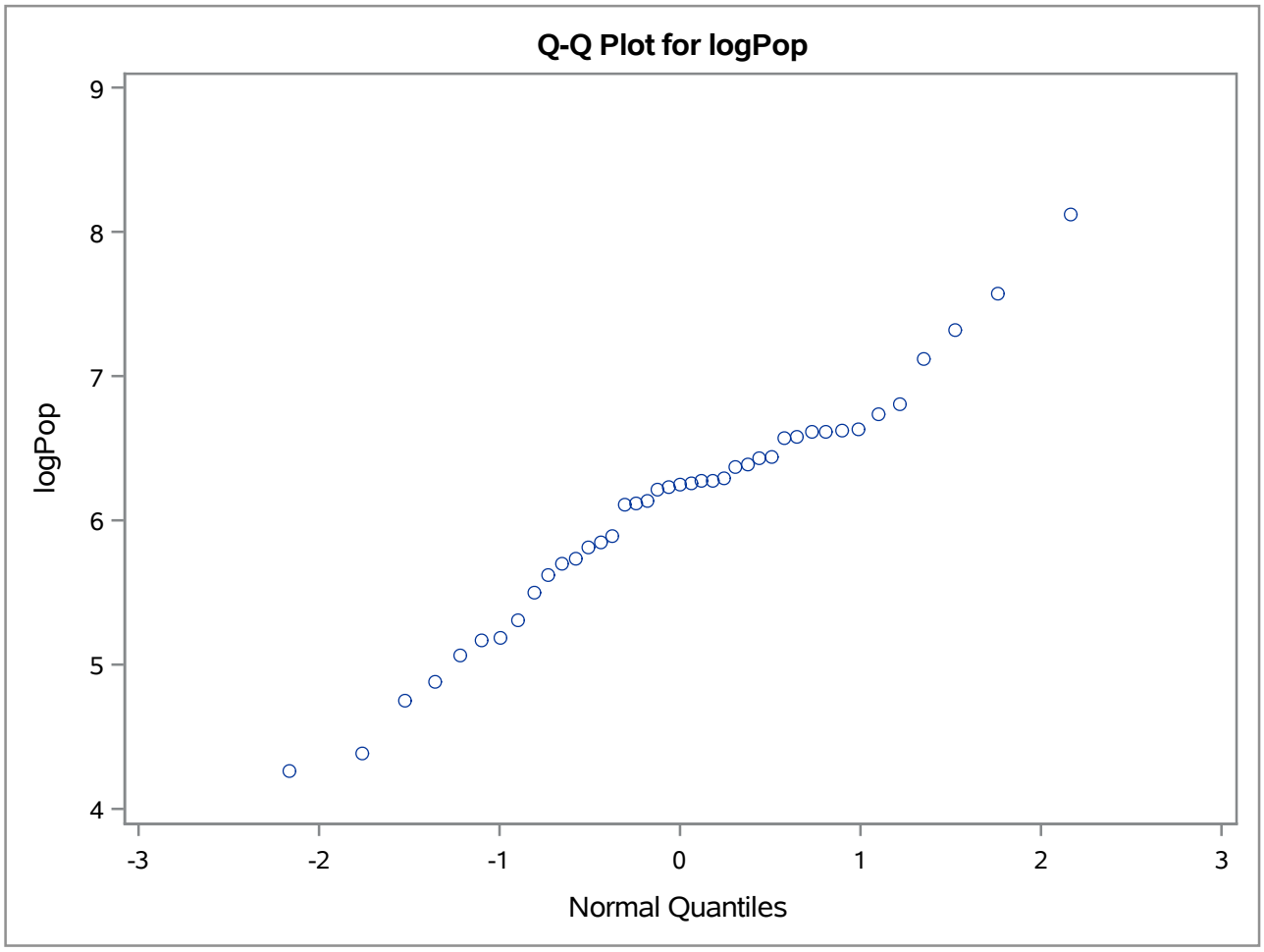
Quantiles (Definition 5)	
Level	**Quantile**
10%	5.06260
5%	4.75359
1%	4.26268
0% Min	4.26268

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
4.26268	Charleston	40	6.80793	Baltimore	17
4.38203	Wilmington	6	7.11721	Houston	35
4.75359	Albany	24	7.32185	Detroit	18
4.88280	Little Rock	2	7.57558	Philadelphia	29
5.06260	Hartford	5	8.12237	Chicago	11

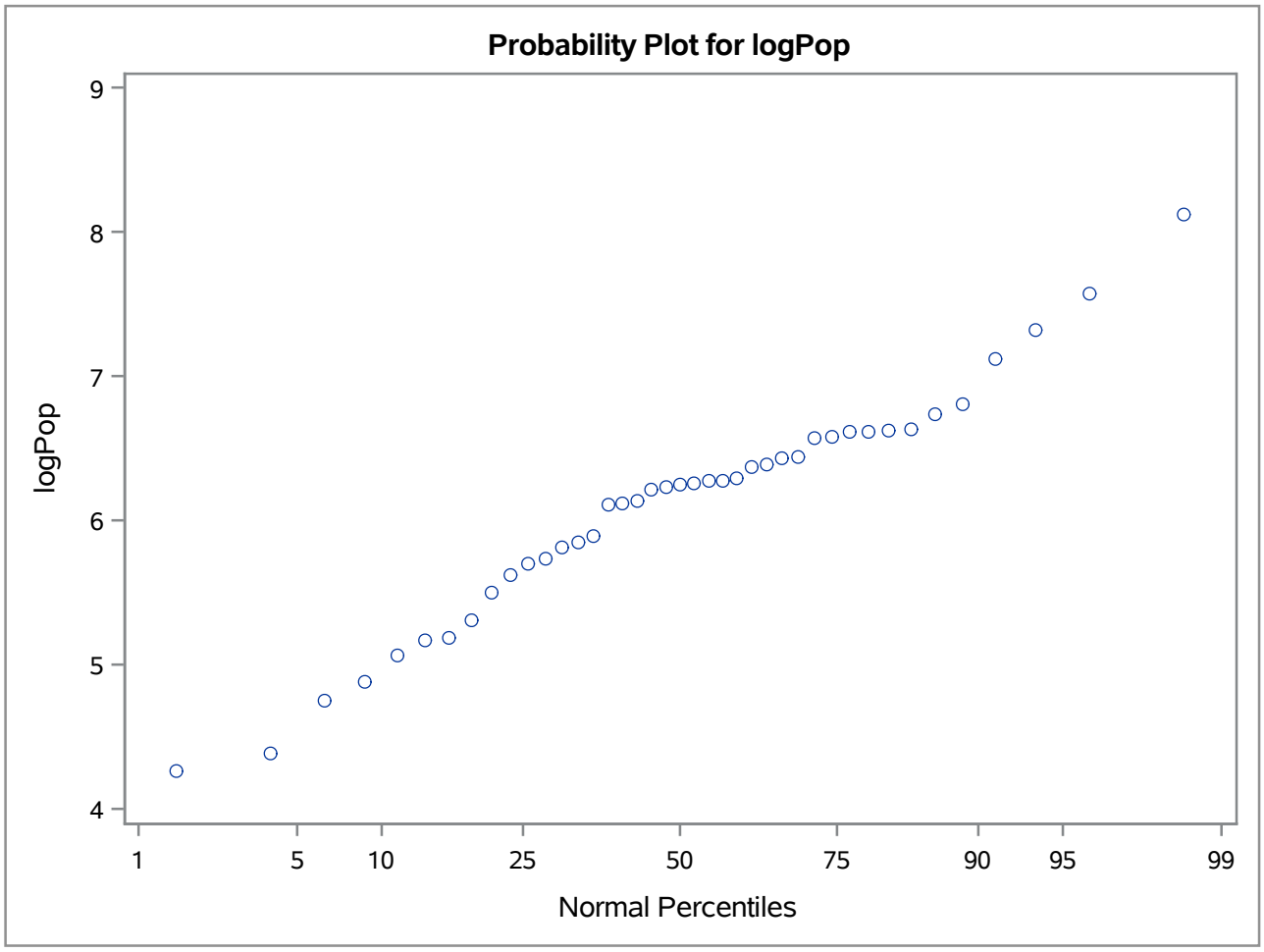
The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: logTemp

Moments			
N	41	**Sum Weights**	41
Mean	4.01333123	**Sum Observations**	164.54658
Std Deviation	0.12490018	**Variance**	0.01560006
Skewness	0.59323672	**Kurtosis**	0.02073122
Uncorrected SS	661.003932	**Corrected SS**	0.62400223
Coeff Variation	3.11213244	**Std Error Mean**	0.01950613

Basic Statistical Measures			
Location		**Variability**	
Mean	4.013331	**Std Deviation**	0.12490
Median	4.000034	**Variance**	0.01560
Mode	3.941582	**Range**	0.55137
		Interquartile Range	0.15866

Note: The mode displayed is the smallest of 2 modes with a count of 2.

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	205.7472	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.962602	**Pr < W**	0.1938
Kolmogorov-Smirnov	**D**	0.099835	**Pr > D**	>0.1500
Cramer-von Mises	**W-Sq**	0.092691	**Pr > W-Sq**	0.1391
Anderson-Darling	**A-Sq**	0.596405	**Pr > A-Sq**	0.1163

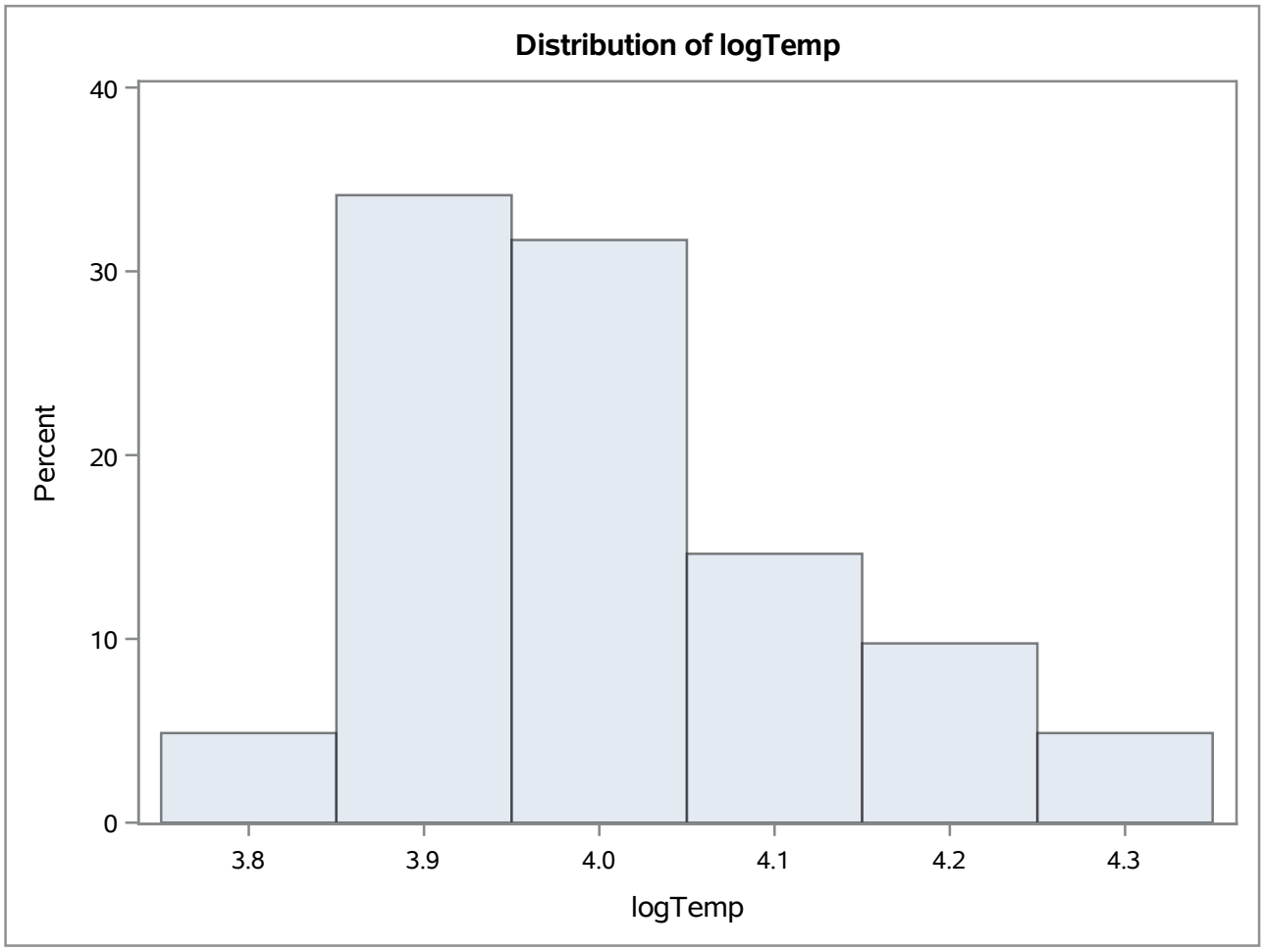
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	4.32413
99%	4.32413
95%	4.23266
90%	4.22391
75% Q3	4.08261
50% Median	4.00003

The UNIVARIATE Procedure
Variable: logTemp

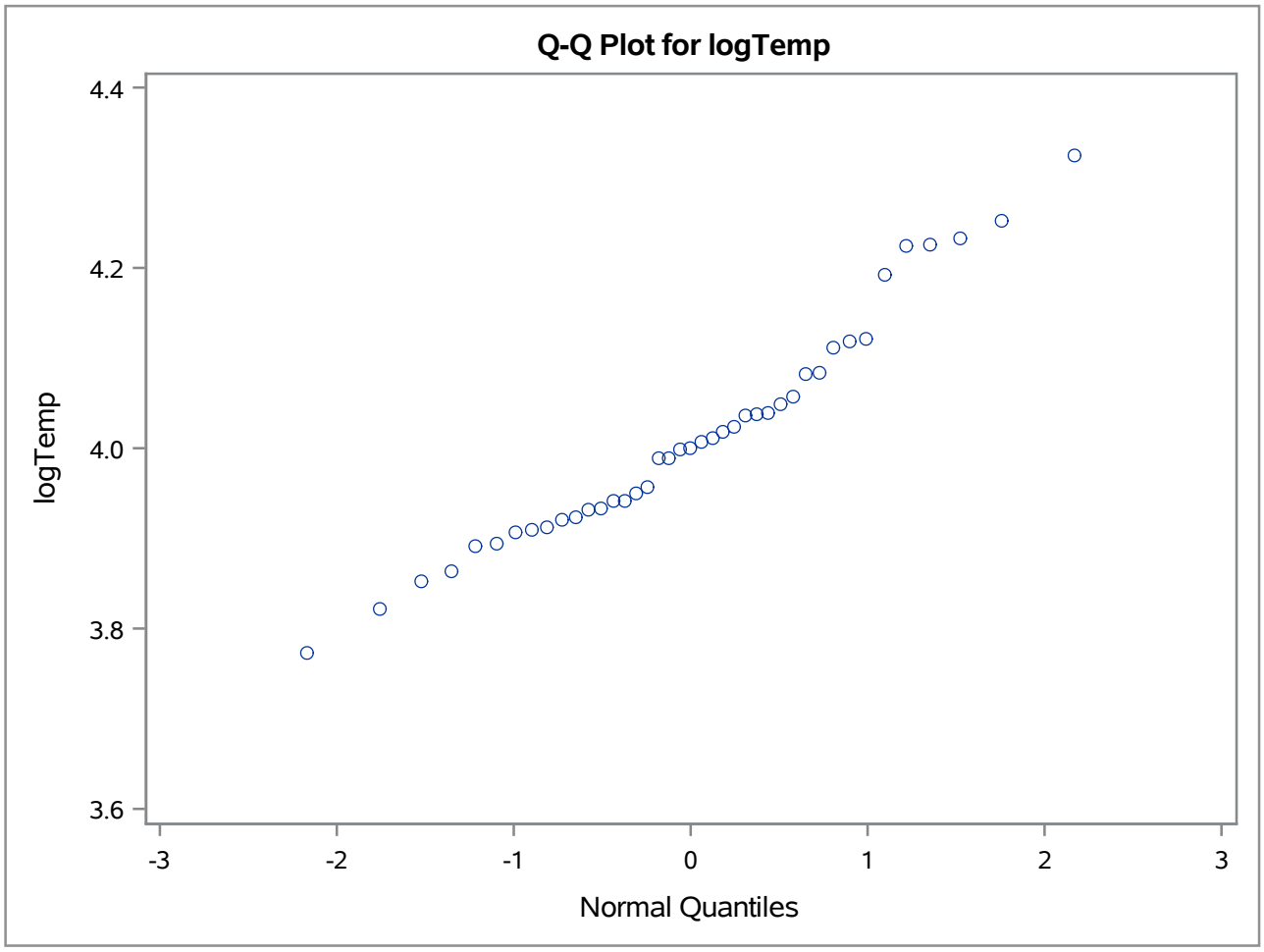
Quantiles (Definition 5)	
Level	**Quantile**
25% Q1	3.92395
10%	3.89182
5%	3.85227
1%	3.77276
0% Min	3.77276

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
3.77276	Minn-St. Paul	19	4.22391	New Orleans	16
3.82210	Milwaukee	41	4.22537	Jacksonville	8
3.85227	Buffalo	25	4.23266	Houston	35
3.86283	Albany	24	4.25277	Phoenix	1
3.89182	Des Moines	13	4.32413	Miami	9

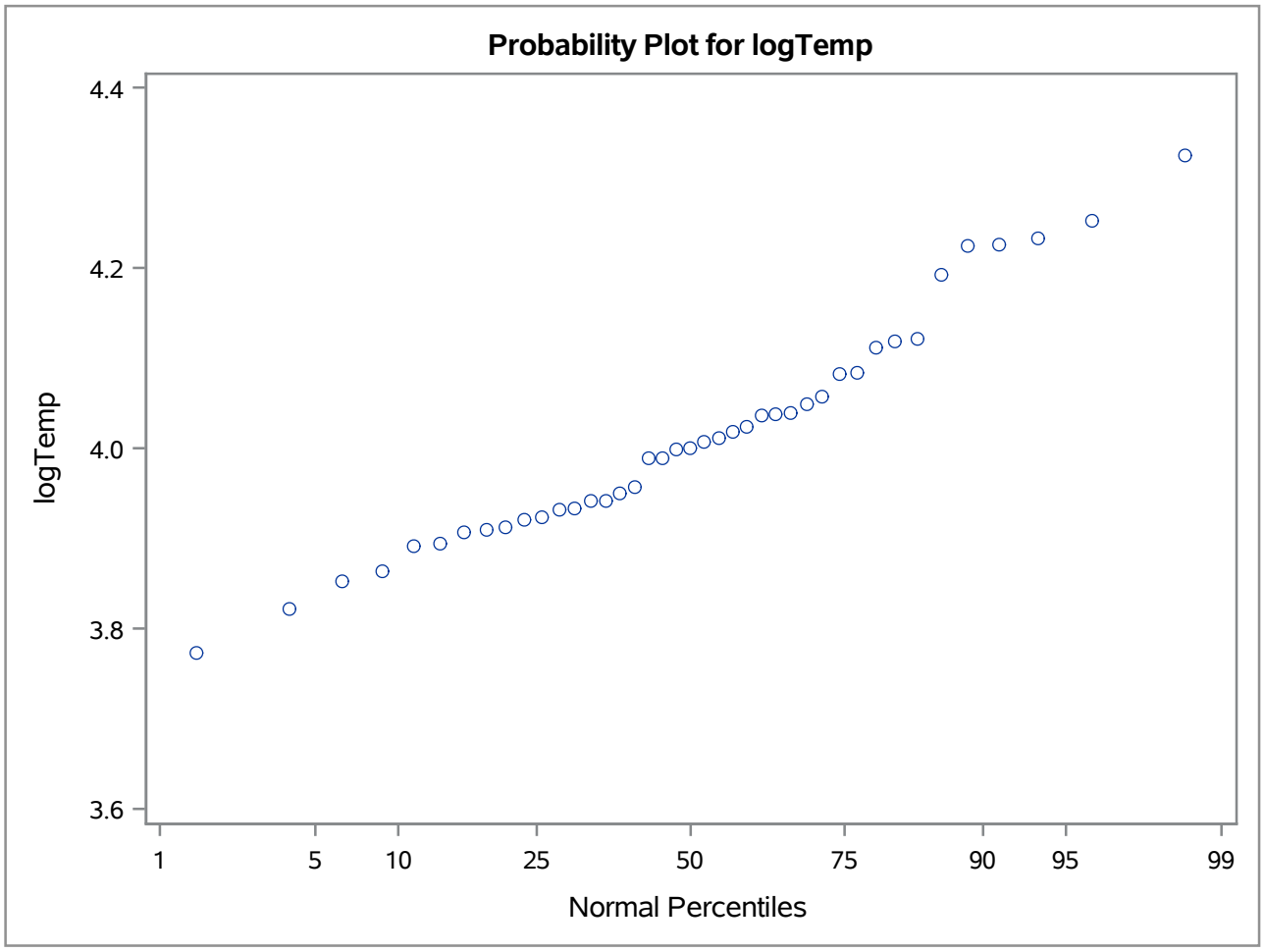
The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: RainSq

Moments			
N	41	**Sum Weights**	41
Mean	1487.1508	**Sum Observations**	60973.1827
Std Deviation	793.181755	**Variance**	629137.296
Skewness	0.41412862	**Kurtosis**	0.5570536
Uncorrected SS	115841809	**Corrected SS**	25165491.9
Coeff Variation	53.3356642	**Std Error Mean**	123.874179

Basic Statistical Measures			
Location		**Variability**	
Mean	1487.151	**Std Deviation**	793.18175
Median	1500.788	**Variance**	629137
Mode	.	**Range**	3526
		Interquartile Range	899.95050

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	12.00533	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.969573	**Pr < W**	0.3339
Kolmogorov-Smirnov	**D**	0.090262	**Pr > D**	>0.1500
Cramer-von Mises	**W-Sq**	0.059515	**Pr > W-Sq**	>0.2500
Anderson-Darling	**A-Sq**	0.392102	**Pr > A-Sq**	>0.2500

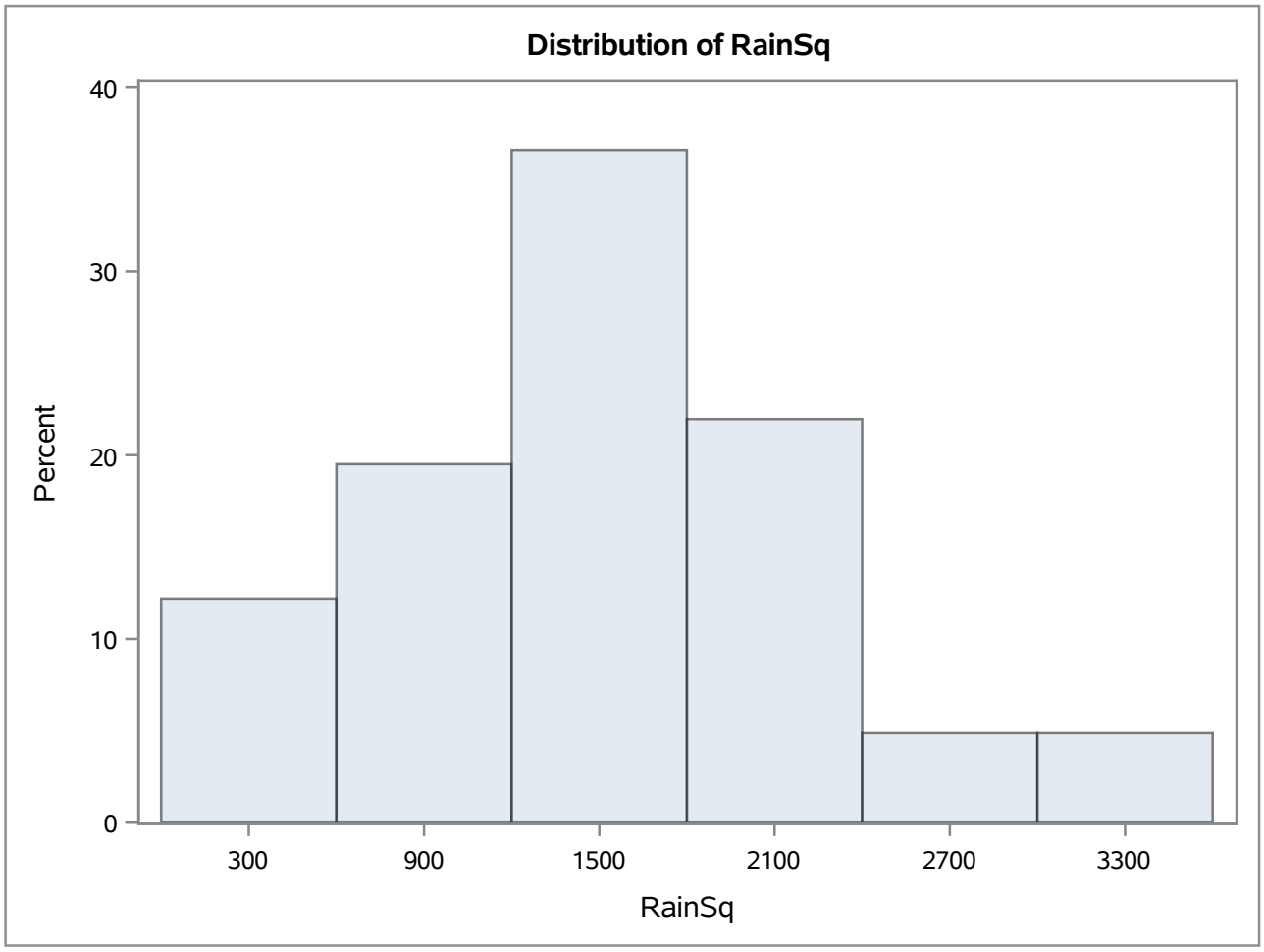
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	3576.0400
99%	3576.0400
95%	2966.9809
90%	2354.1904
75% Q3	1858.4721
50% Median	1500.7876
25% Q1	958.5216

The UNIVARIATE Procedure
Variable: RainSq

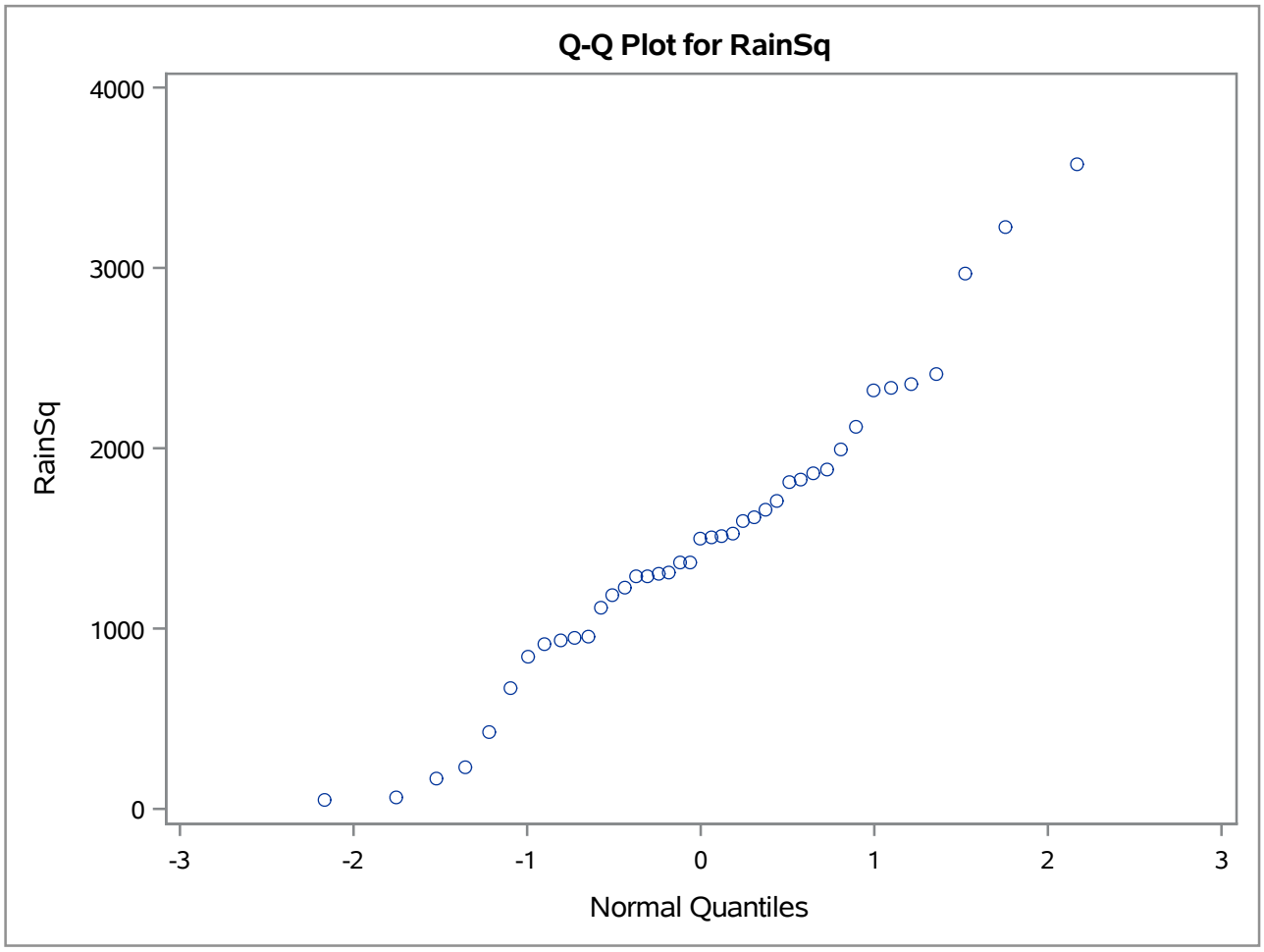
Quantiles (Definition 5)	
Level	**Quantile**
10%	426.8356
5%	167.7025
1%	49.7025
0% Min	49.7025

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
49.7025	Phoenix	1	2354.19	Little Rock	2
60.3729	Albuquerque	23	2410.81	Memphis	32
167.7025	Denver	4	2966.98	Jacksonville	8
230.1289	Salt Lake Cit	36	3222.83	New Orleans	16
426.8356	San Francisco	3	3576.04	Miami	9

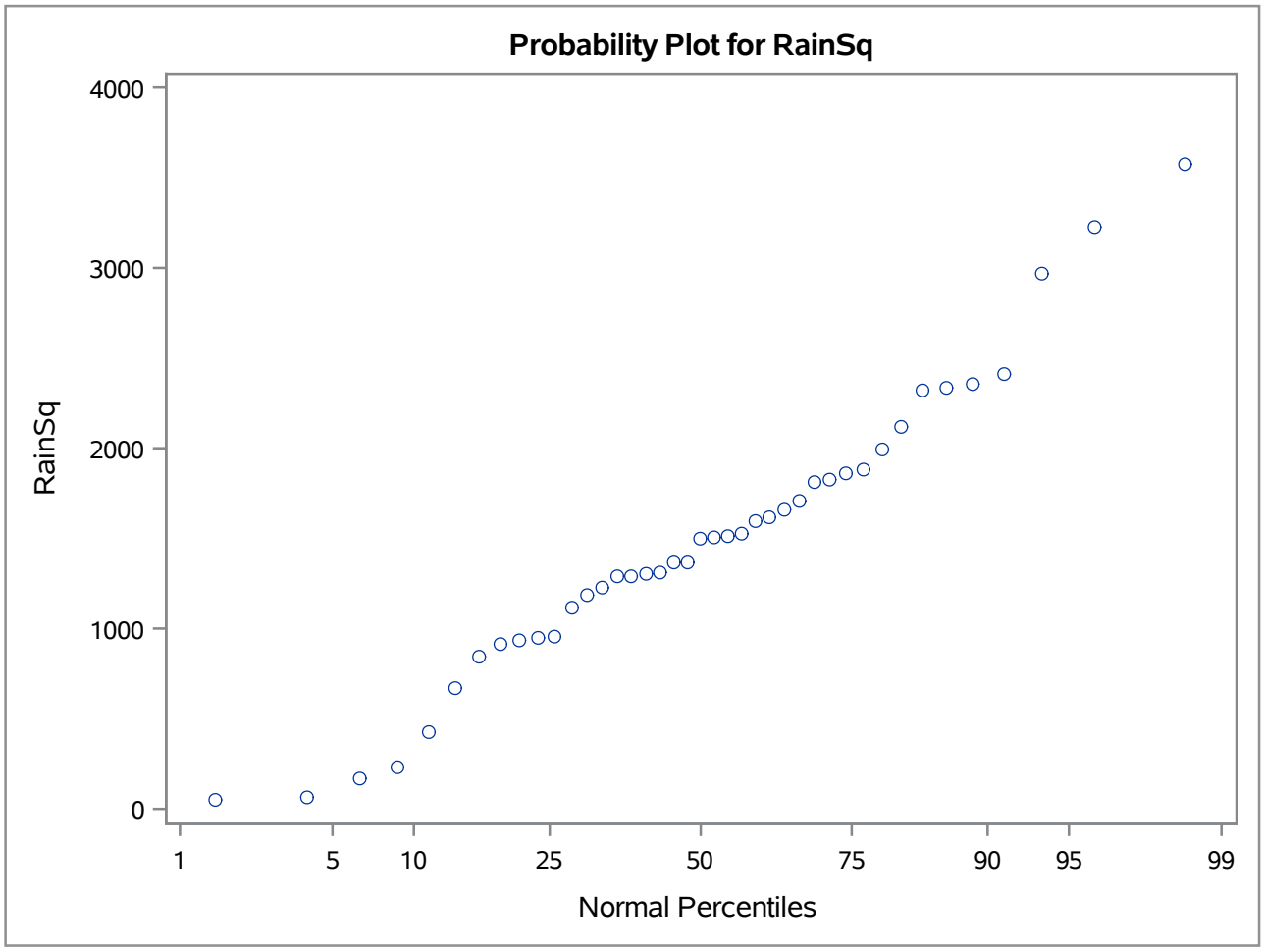
The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: manpercap

Moments			
N	41	**Sum Weights**	41
Mean	0.7483815	**Sum Observations**	30.6836416
Std Deviation	0.42989042	**Variance**	0.18480577
Skewness	2.57290235	**Kurtosis**	8.90475499
Uncorrected SS	30.3553006	**Corrected SS**	7.39223085
Coeff Variation	57.4426836	**Std Error Mean**	0.0671376

Basic Statistical Measures			
Location		**Variability**	
Mean	0.748382	**Std Deviation**	0.42989
Median	0.667308	**Variance**	0.18481
Mode	.	**Range**	2.41907
		Interquartile Range	0.32708

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	11.14698	**Pr > |t|**	<.0001
Sign	**M**	20.5	**Pr >= |M|**	<.0001
Signed Rank	**S**	430.5	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.762799	**Pr < W**	<0.0001
Kolmogorov-Smirnov	**D**	0.189836	**Pr > D**	<0.0100
Cramer-von Mises	**W-Sq**	0.4342	**Pr > W-Sq**	<0.0050
Anderson-Darling	**A-Sq**	2.566198	**Pr > A-Sq**	<0.0050

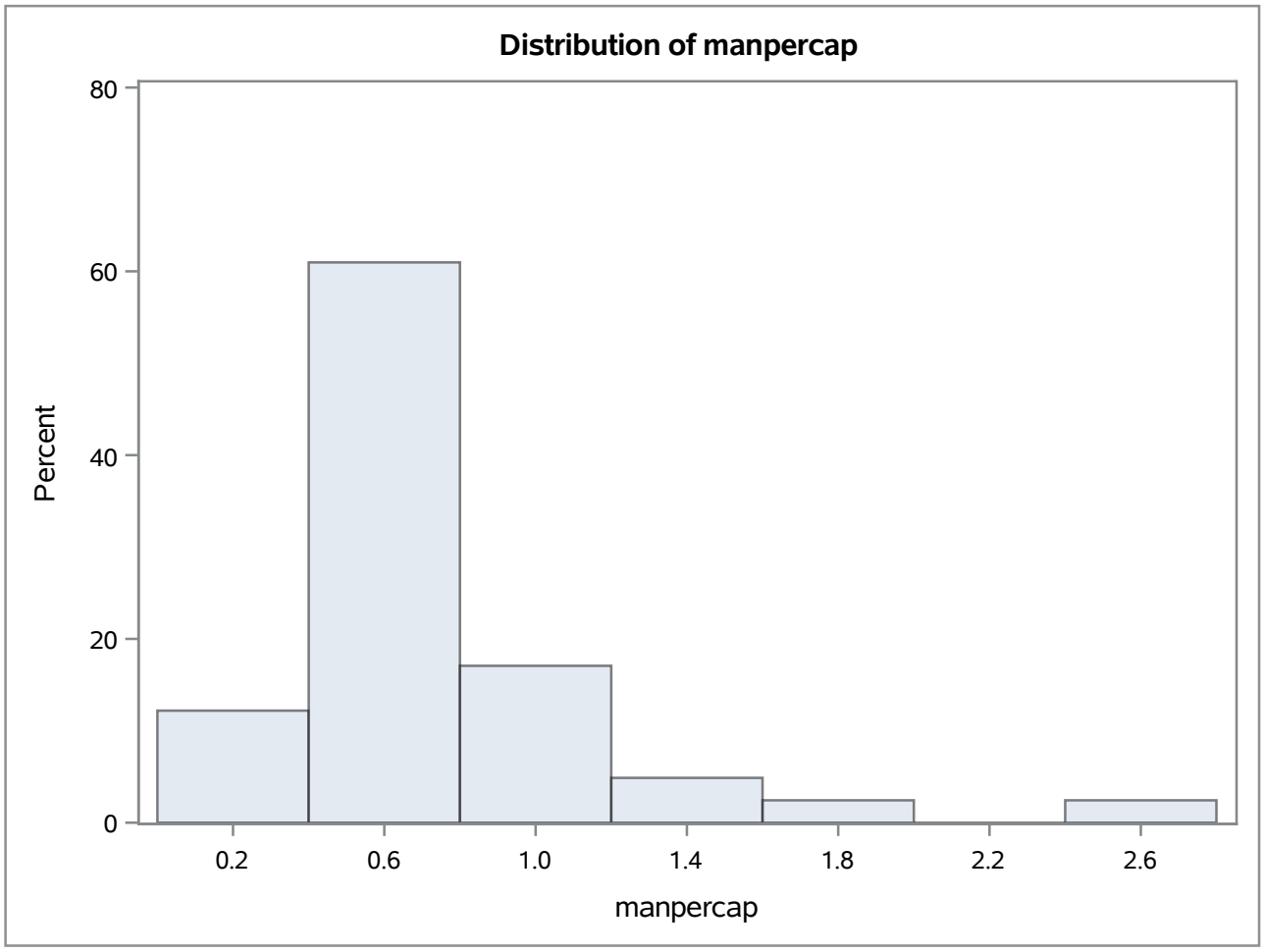
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	2.607595
99%	2.607595
95%	1.340879
90%	1.019868
75% Q3	0.844492
50% Median	0.667308
25% Q1	0.517413

The UNIVARIATE Procedure
Variable: manpercap

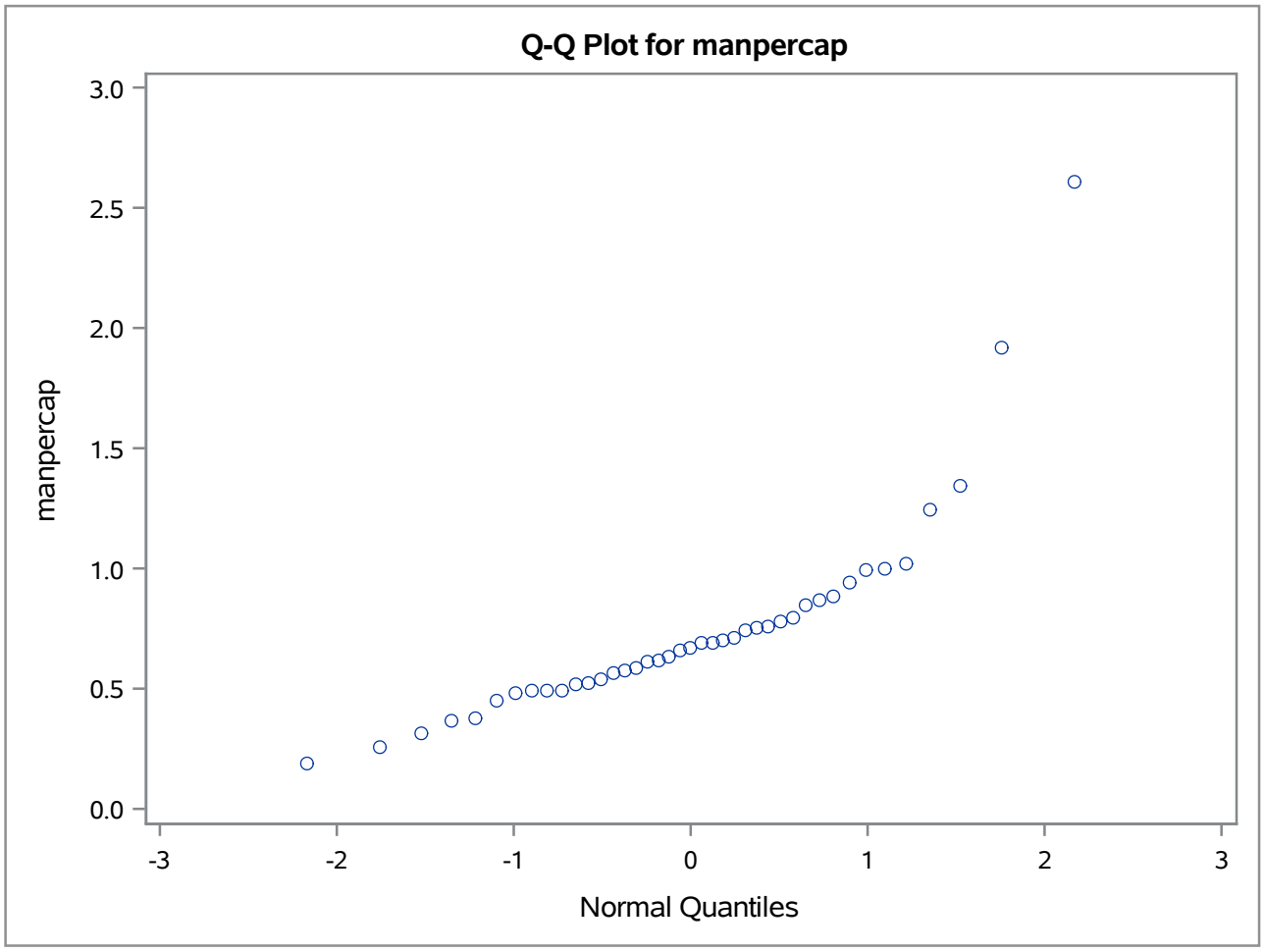
Quantiles (Definition 5)	
Level	**Quantile**
10%	0.379310
5%	0.311688
1%	0.188525
0% Min	0.188525

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
0.188525	Albuquerque	23	1.01987	Cincinnati	26
0.257089	Jacksonville	8	1.24598	St. Louis	21
0.311688	Norfolk	37	1.34088	Cleveland	27
0.365979	Phoenix	1	1.91620	Providence	31
0.379310	Albany	24	2.60759	Hartford	5

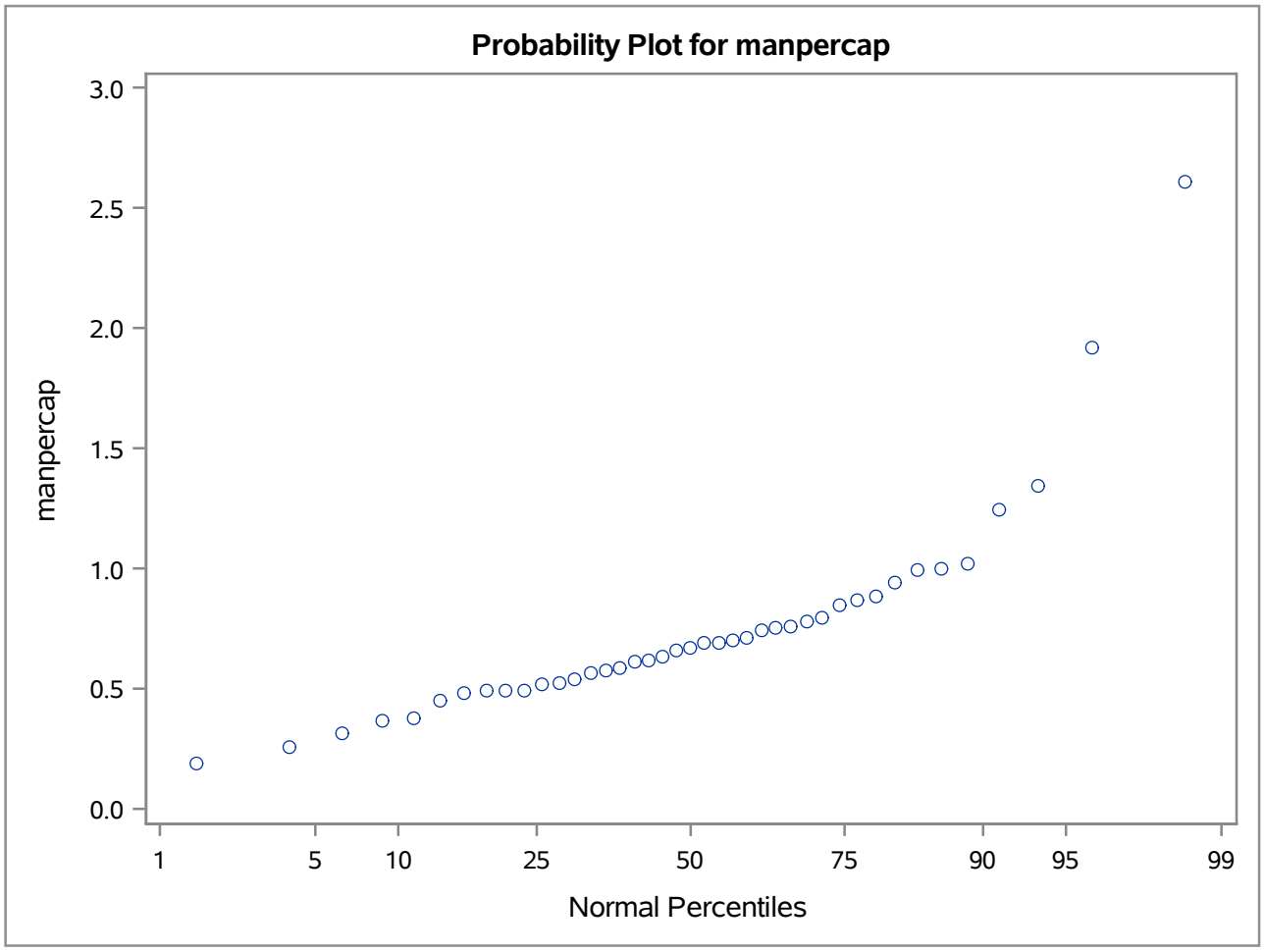
The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure
Variable: logMpC

Moments			
N	41	**Sum Weights**	41
Mean	-0.4096107	**Sum Observations**	-16.794039
Std Deviation	0.48288132	**Variance**	0.23317437
Skewness	0.18395946	**Kurtosis**	1.69034361
Uncorrected SS	16.205993	**Corrected SS**	9.32697493
Coeff Variation	-117.88787	**Std Error Mean**	0.07541339

Basic Statistical Measures			
Location		**Variability**	
Mean	-0.40961	**Std Deviation**	0.48288
Median	-0.40450	**Variance**	0.23317
Mode	.	**Range**	2.62696
		Interquartile Range	0.48989

Tests for Location: Mu0=0				
Test	**Statistic**		**p Value**	
Student's t	**t**	-5.43154	**Pr > |t|**	<.0001
Sign	**M**	-15	**Pr >= |M|**	<.0001
Signed Rank	**S**	-327	**Pr >= |S|**	<.0001

Tests for Normality				
Test	**Statistic**		**p Value**	
Shapiro-Wilk	**W**	0.967428	**Pr < W**	0.2834
Kolmogorov-Smirnov	**D**	0.109926	**Pr > D**	>0.1500
Cramer-von Mises	**W-Sq**	0.084941	**Pr > W-Sq**	0.1795
Anderson-Darling	**A-Sq**	0.537524	**Pr > A-Sq**	0.1642

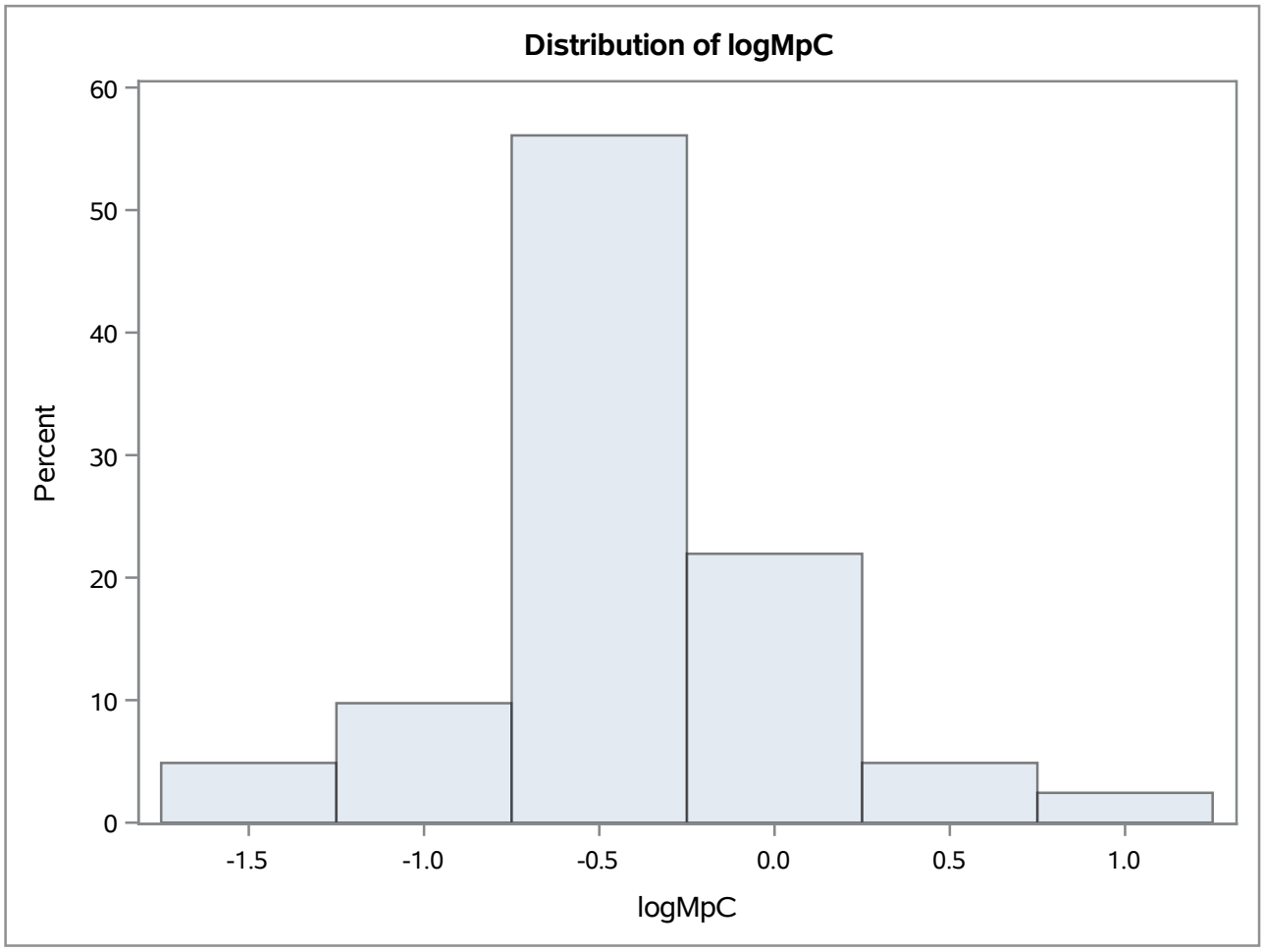
Quantiles (Definition 5)	
Level	**Quantile**
100% Max	0.9584283
99%	0.9584283
95%	0.2933252
90%	0.0196728
75% Q3	-0.1690195
50% Median	-0.4045040
25% Q1	-0.6589140

The UNIVARIATE Procedure
Variable: logMpC

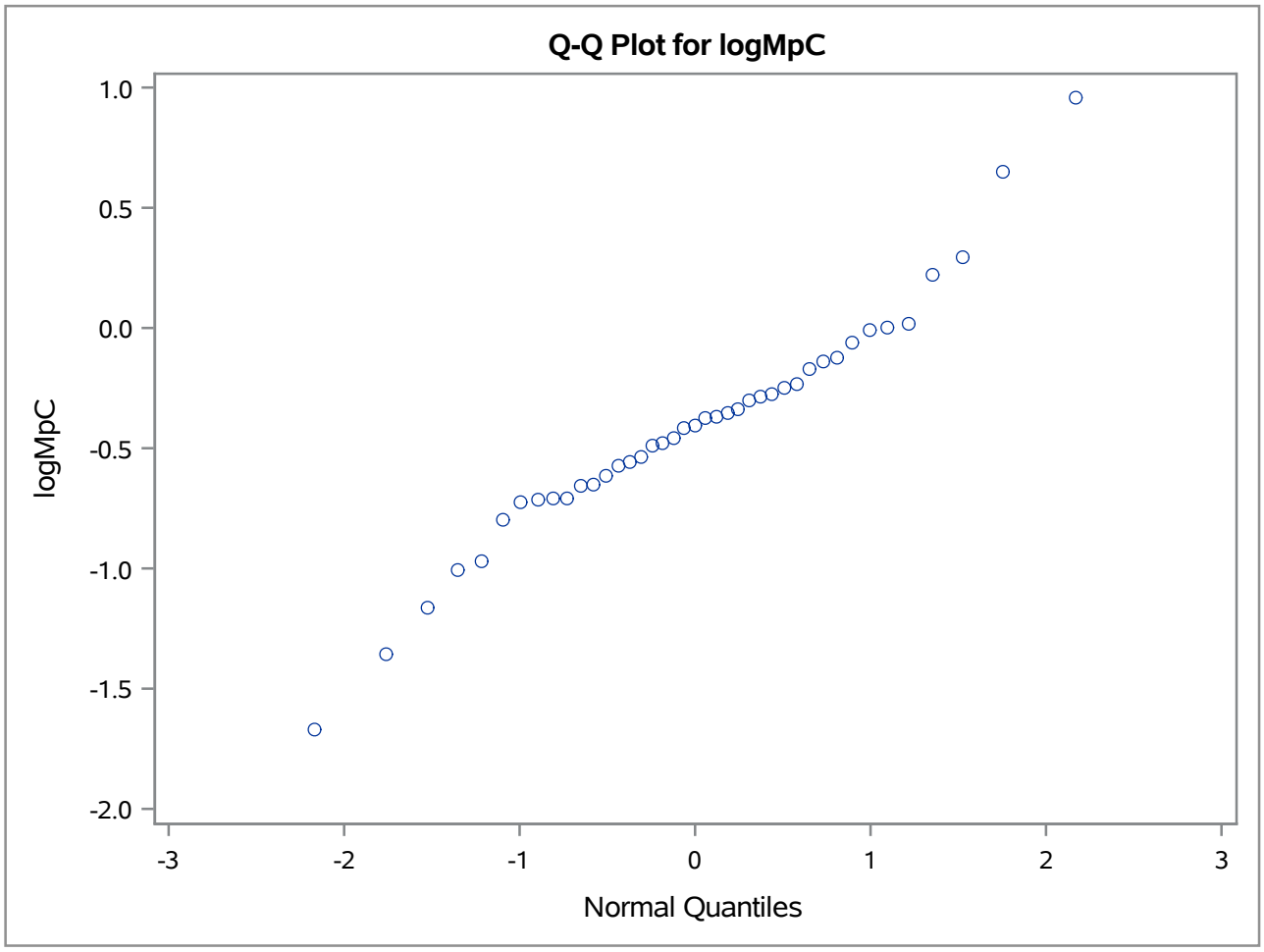
Quantiles (Definition 5)	
Level	**Quantile**
10%	-0.9694006
5%	-1.1657516
1%	-1.6685268
0% Min	-1.6685268

Extreme Observations					
Lowest			**Highest**		
Value	**City**	**Obs**	**Value**	**City**	**Obs**
-1.668527	Albuquerque	23	0.0196728	Cincinnati	26
-1.358334	Jacksonville	8	0.2199229	St. Louis	21
-1.165752	Norfolk	37	0.2933252	Cleveland	27
-1.005178	Phoenix	1	0.6503446	Providence	31
-0.969401	Albany	24	0.9584283	Hartford	5

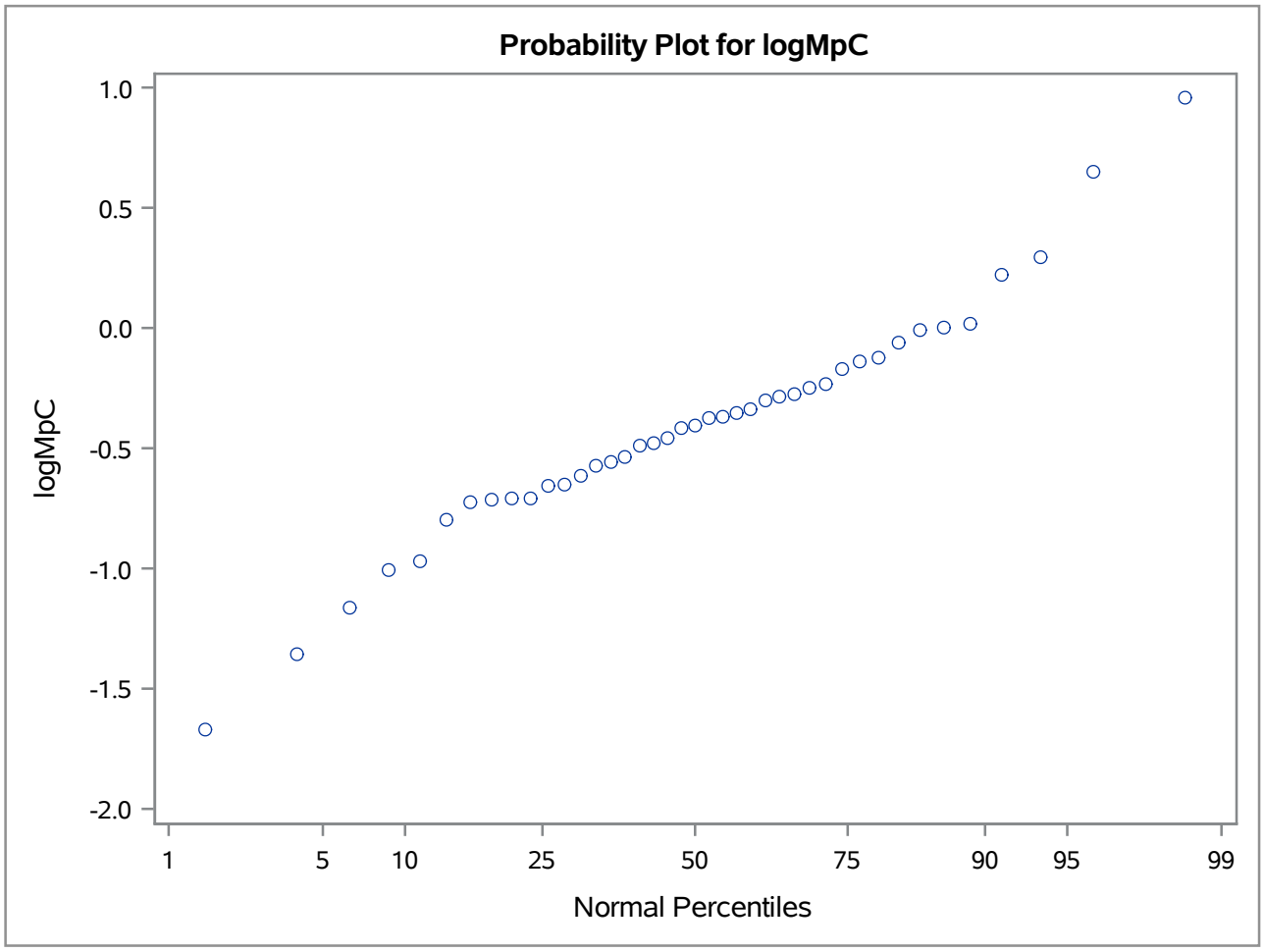
The UNIVARIATE Procedure



The UNIVARIATE Procedure



The UNIVARIATE Procedure



The REG Procedure
Model: MODEL1
Dependent Variable: logSO2

Number of Observations Read	41
Number of Observations Used	41

Backward Elimination: Step 0

All Variables Entered: R-Square = 0.5301 and C(p) = 7.0000

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	6	10.45876	1.74313	6.39	0.0001
Error	34	9.27017	0.27265		
Corrected Total	40	19.72893			

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	18.01742	7.07040	1.77054	6.49	0.0155
logTemp	-3.68352	1.68355	1.30521	4.79	0.0356
logMan	0.38994	0.19823	1.05506	3.87	0.0574
logPop	-0.19861	0.24269	0.18260	0.67	0.4189
Wind	-0.16922	0.06746	1.71533	6.29	0.0171
RainSq	0.00019776	0.00023501	0.19306	0.71	0.4060
RainDays	0.00189	0.00627	0.02473	0.09	0.7651

Bounds on condition number: 6.4868, 167.64

Backward Elimination: Step 1

Variable RainDays Removed: R-Square = 0.5289 and C(p) = 5.0907

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	10.43403	2.08681	7.86	<.0001
Error	35	9.29490	0.26557		
Corrected Total	40	19.72893			

The REG Procedure
Model: MODEL1
Dependent Variable: logSO2

Backward Elimination: Step 1

Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	19.78820	3.87467	6.92661	26.08	<.0001
logTemp	-4.09560	0.96790	4.75501	17.91	0.0002
logMan	0.38313	0.19436	1.03196	3.89	0.0566
logPop	-0.18368	0.23447	0.16298	0.61	0.4387
Wind	-0.17355	0.06505	1.89039	7.12	0.0115
RainSq	0.00025604	0.00013159	1.00537	3.79	0.0598

Bounds on condition number: 5.3585, 78.914

Backward Elimination: Step 2

Variable logPop Removed: R-Square = 0.5206 and C(p) = 3.6884

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	10.27105	2.56776	9.77	<.0001
Error	36	9.45788	0.26272		
Corrected Total	40	19.72893			

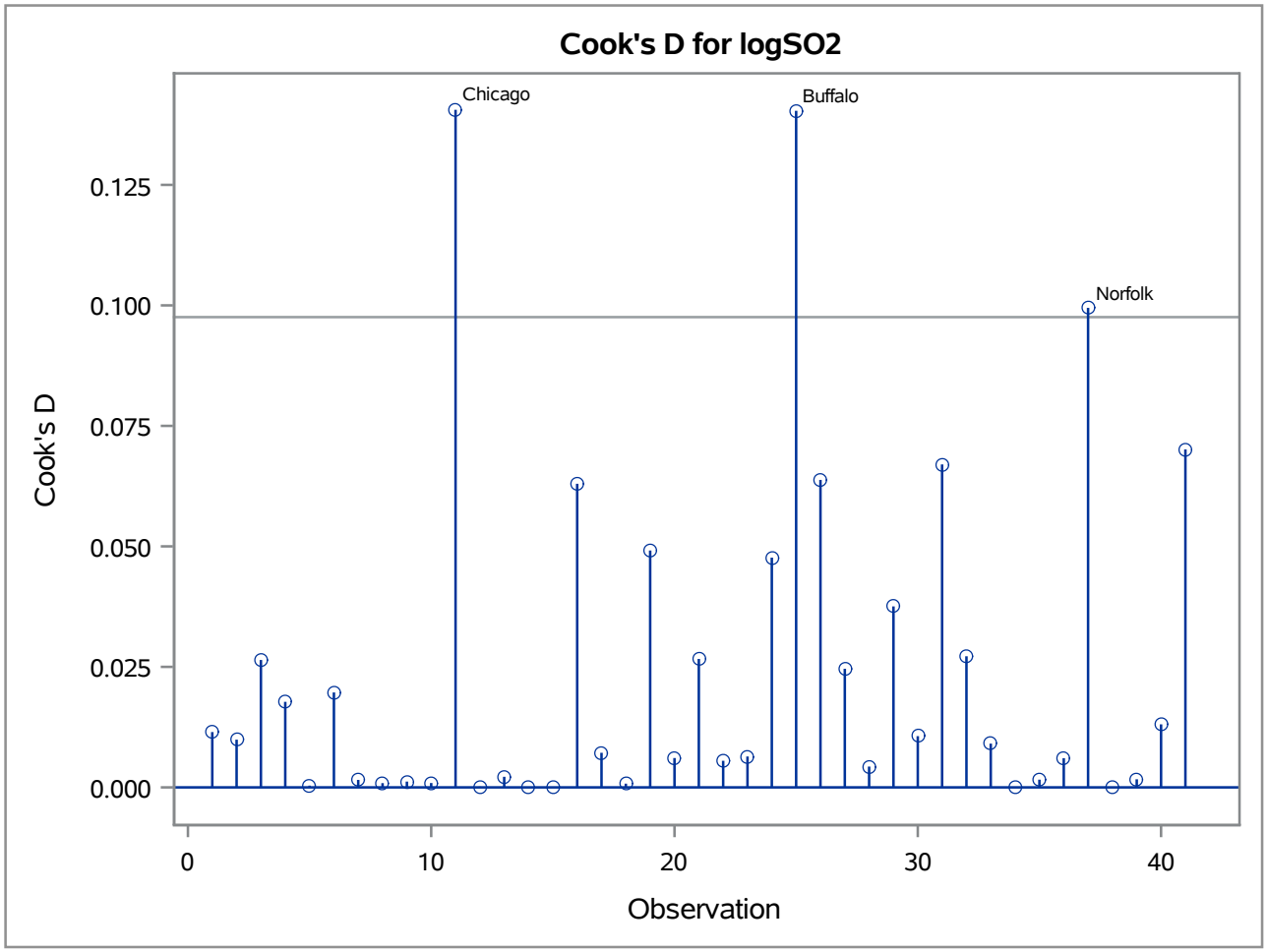
Variable	Parameter Estimate	Standard Error	Type II SS	F Value	Pr > F
Intercept	20.99647	3.53533	9.26665	35.27	<.0001
logTemp	-4.47616	0.83266	7.59215	28.90	<.0001
logMan	0.24785	0.08871	2.05087	7.81	0.0083
Wind	-0.18255	0.06368	2.15883	8.22	0.0069
RainSq	0.00029186	0.00012273	1.48569	5.66	0.0228

Bounds on condition number: 1.6468, 21.848

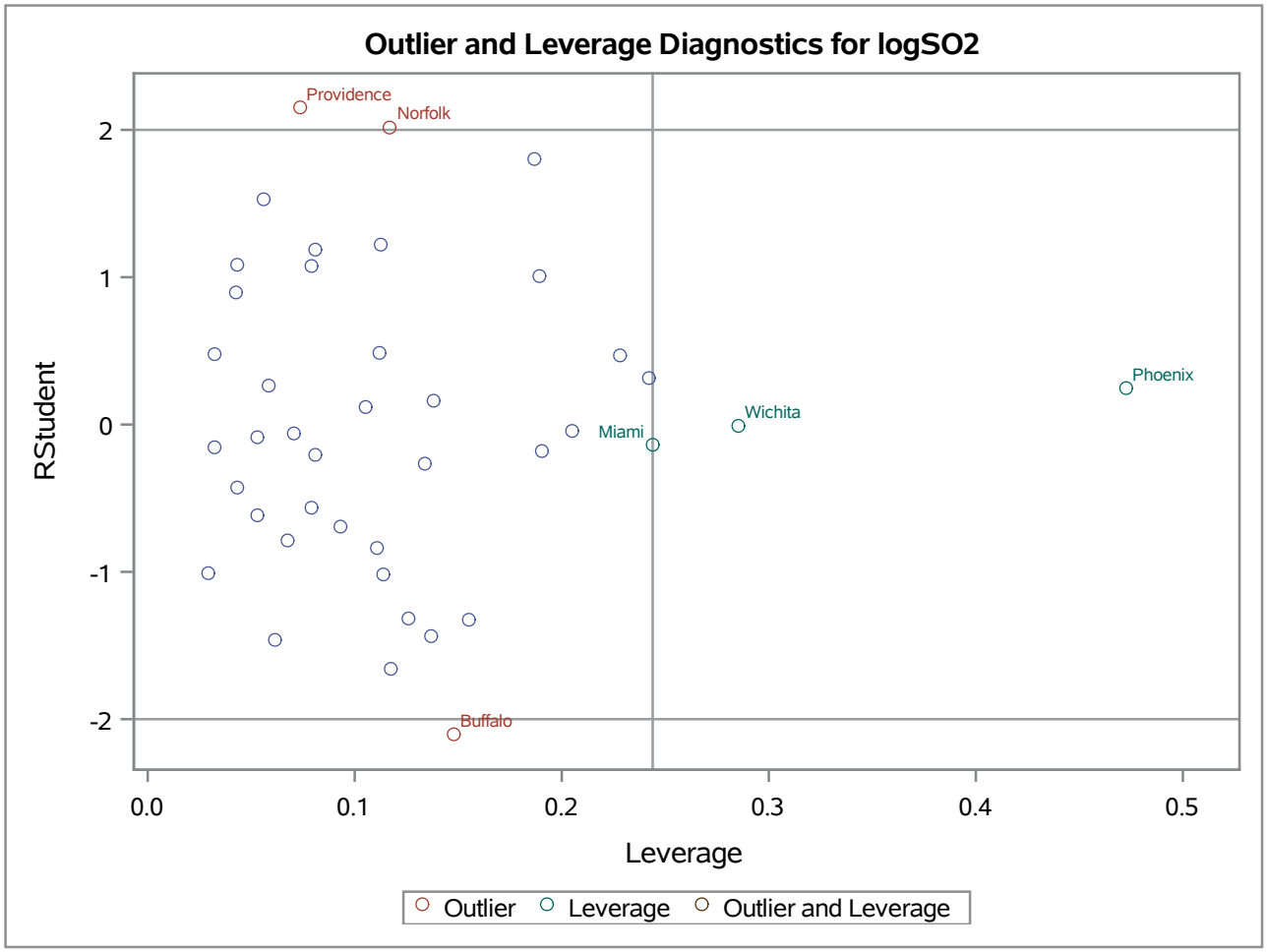
All variables left in the model are significant at the 0.1000 level.

Summary of Backward Elimination							
Step	Variable Removed	Number Vars In	Partial R-Square	Model R-Square	C(p)	F Value	Pr > F
1	RainDays	5	0.0013	0.5289	5.0907	0.09	0.7651
2	logPop	4	0.0083	0.5206	3.6884	0.61	0.4387

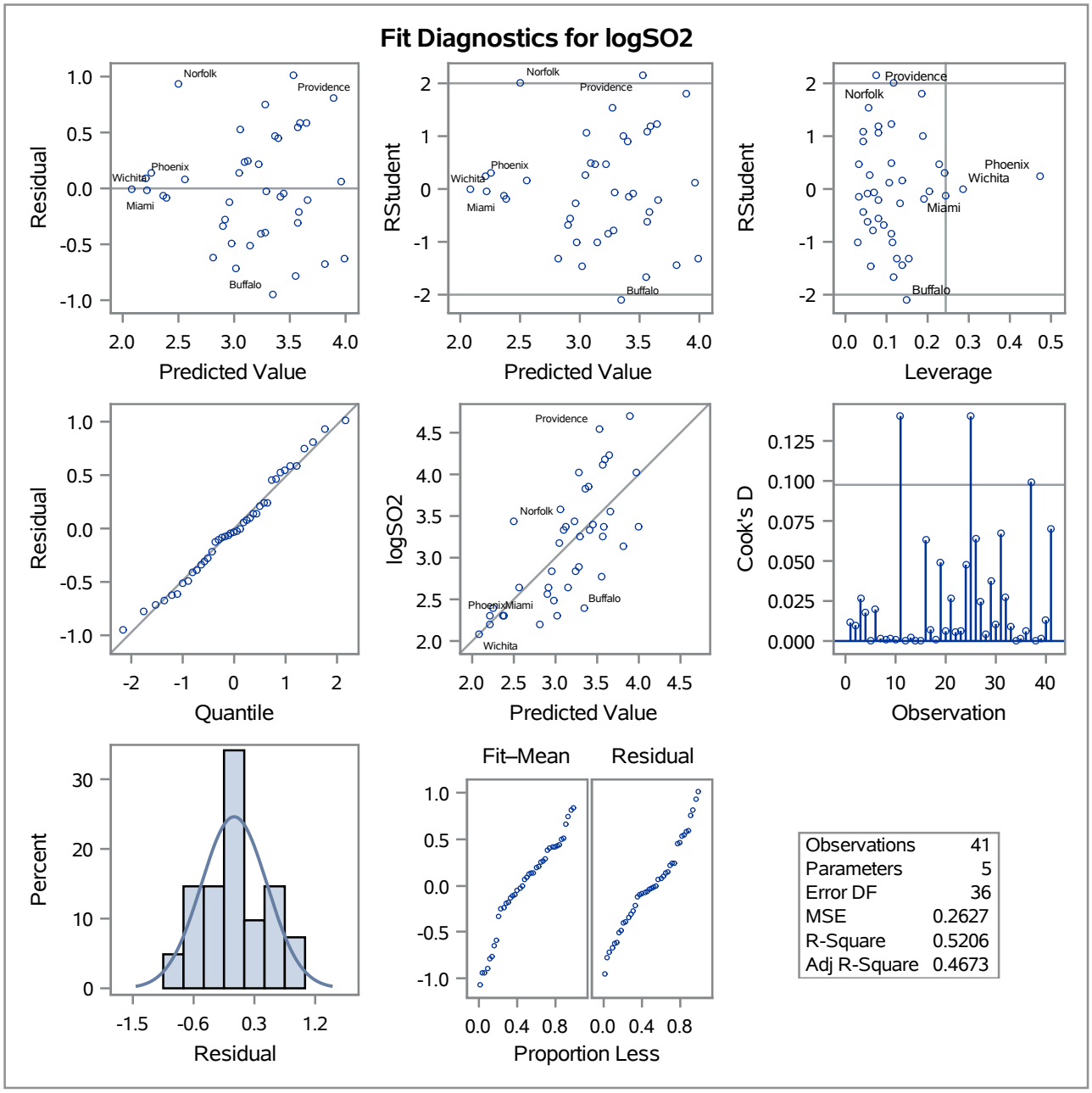
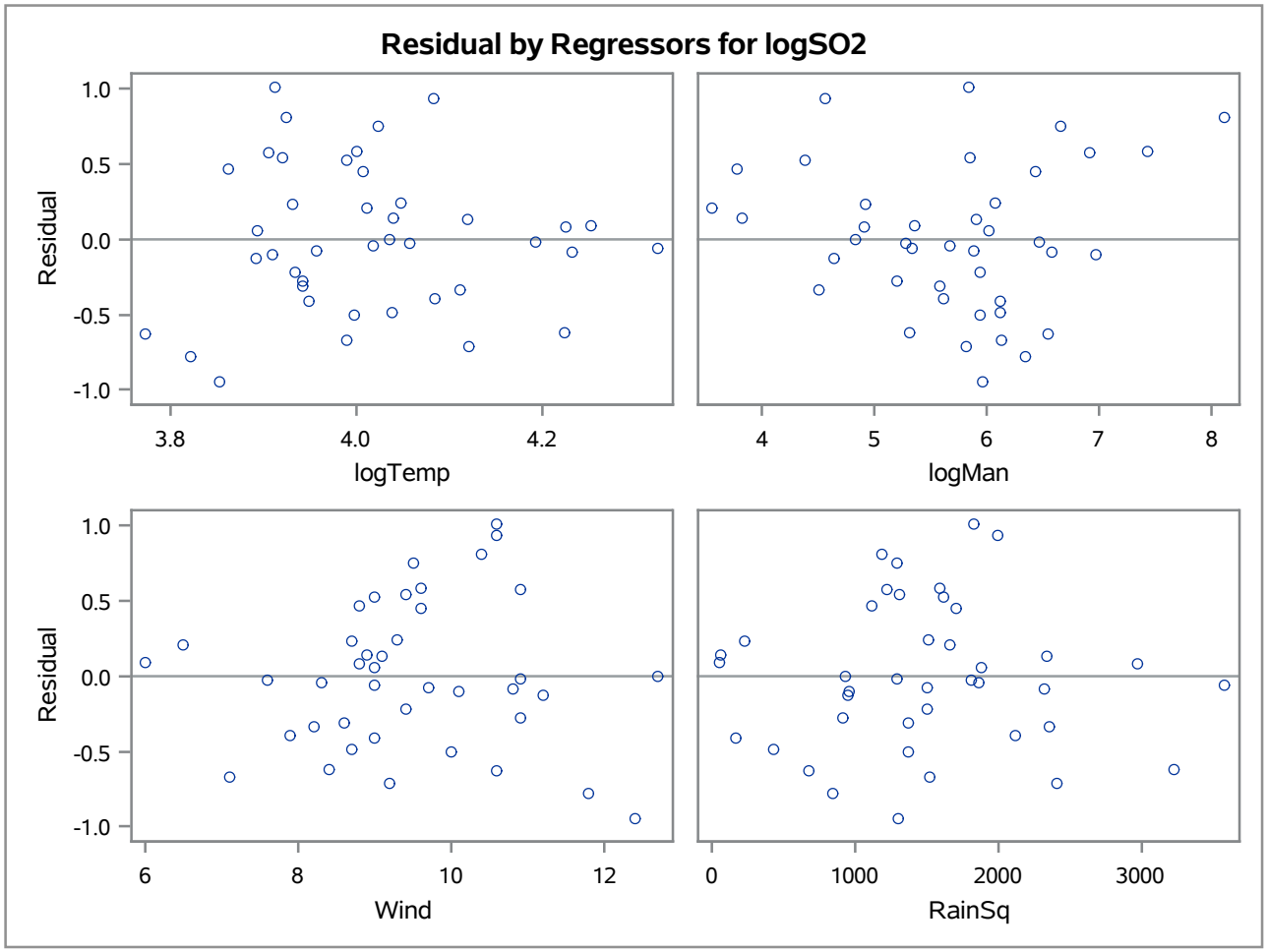
The REG Procedure
Model: MODEL1
Dependent Variable: logSO2



The REG Procedure
Model: MODEL1
Dependent Variable: logSO2



The REG Procedure
Model: MODEL1
Dependent Variable: logSO2



The REG Procedure
Model: MODEL1
Dependent Variable: logSO2