

CJ 405 FA 01
 HANDOUT SEPTEMBER 10, 2001

VIOLRA85 VIOLENT CRIME RATE 1983 PER 100K POP

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	54.0	1	2.0	2.0
	120.0	1	2.0	4.0
	125.0	1	2.0	6.0
	133.0	1	2.0	8.0
	160.0	1	2.0	10.0
	172.0	1	2.0	12.0
	181.0	1	2.0	14.0
	191.0	2	4.0	18.0
	213.0	1	2.0	20.0
	218.0	1	2.0	22.0
	237.0	1	2.0	24.0
	239.0	1	2.0	26.0
	252.0	1	2.0	28.0
	256.0	1	2.0	30.0
	280.0	1	2.0	32.0
	284.0	1	2.0	34.0
	293.0	1	2.0	36.0
	298.0	1	2.0	38.0
	322.0	1	2.0	40.0
	327.0	1	2.0	42.0
	343.0	1	2.0	44.0
	355.0	1	2.0	46.0
	372.0	1	2.0	48.0
	375.0	1	2.0	50.0
	398.0	1	2.0	52.0
	402.0	1	2.0	54.0
	410.0	1	2.0	56.0
	416.0	1	2.0	58.0
	423.0	1	2.0	60.0
	453.0	1	2.0	62.0
	457.0	1	2.0	64.0
	476.0	1	2.0	66.0
	477.0	1	2.0	68.0
	488.0	1	2.0	70.0
	494.0	1	2.0	72.0
	512.0	1	2.0	74.0
	553.0	2	4.0	78.0
	577.0	1	2.0	80.0
	614.0	1	2.0	82.0
	617.0	1	2.0	84.0
	641.0	1	2.0	86.0
	655.0	1	2.0	88.0
	687.0	1	2.0	90.0
	717.0	1	2.0	92.0
	773.0	1	2.0	94.0
	807.0	1	2.0	96.0
	827.0	1	2.0	98.0
	914.0	1	2.0	100.0

STATNAM	CENREGNA	CENDIVNA	VIOL85	VIOLRA85
NODAKOTA	Midwest	W N Cent	.4	54.0
SODAKOTA	Midwest	W N Cent	.8	120.0
NEWHAMP	Northeas	New Engl	1.2	125.0
VERMONT	Northeas	New Engl	.7	133.0
MAINE	Northeas	New Engl	1.8	160.0
WEVIRG	South	S Atlant	3.4	172.0
IOWA	Midwest	W N Cent	5.3	181.0
MINN	Midwest	W N Cent	7.9	191.0
WISC	Midwest	E N Cent	9.1	191.0
MONTANA	West	Mountain	1.7	213.0
NEBRASKA	Midwest	W N Cent	3.5	218.0
WYOMING	West	Mountain	1.2	237.0
IDAHO	West	Mountain	2.4	239.0
HAWAII	West	Pacific	2.6	252.0
UTAH	West	Mountain	4.1	256.0
MISSISS	South	E S Cent	7.3	280.0
INDIANA	Midwest	E N Cent	15.5	284.0
VIRGINIA	South	S Atlant	16.2	293.0
ARKANSAS	South	W S Cent	6.9	298.0
KENTUCKY	South	E S Cent	12.0	322.0
KANSAS	Midwest	W N Cent	7.9	327.0
PENN	Northeas	Mid Atla	40.8	343.0
RHODEISL	Northeas	New Engl	3.4	355.0
WASH	West	Pacific	16.0	372.0
CONN	Northeas	New Engl	11.8	375.0
OHIO	Midwest	E N Cent	42.8	398.0
TENN	South	E S Cent	18.8	402.0
NOCAROL	South	S Atlant	24.9	410.0
ALABAMA	South	E S Cent	16.5	416.0
OKLAHOMA	South	W S Cent	14.0	423.0
DELAWARE	South	S Atlant	2.7	453.0
GEORGIA	South	S Atlant	26.2	457.0
COLORADO	West	Mountain	15.0	476.0
MISSOURI	Midwest	W N Cent	23.7	477.0
OREGON	West	Pacific	13.0	488.0
ARIZONA	West	Mountain	14.6	494.0
TEXAS	South	W S Cent	80.5	512.0
ILLINOIS	Midwest	E N Cent	63.5	553.0
NEWJERSY	Northeas	Mid Atla	41.3	553.0
MASS	Northeas	New Engl	33.3	577.0
ALASKA	West	Pacific	2.9	614.0
SOCAROL	South	S Atlant	20.1	617.0
LOUISIAN	South	W S Cent	28.4	641.0
NEVADA	West	Mountain	5.8	655.0
NEWMEX	West	Mountain	9.6	687.0
MICHIGAN	Midwest	E N Cent	65.0	717.0
CALIF	West	Pacific	194.5	773.0
MARYLAND	South	S Atlant	34.7	807.0
FLORIDA	South	S Atlant	88.3	827.0
NEWYORK	Northeas	Mid Atla	161.5	914.0

P-P PLOTS (from SPSS HELP FILE)

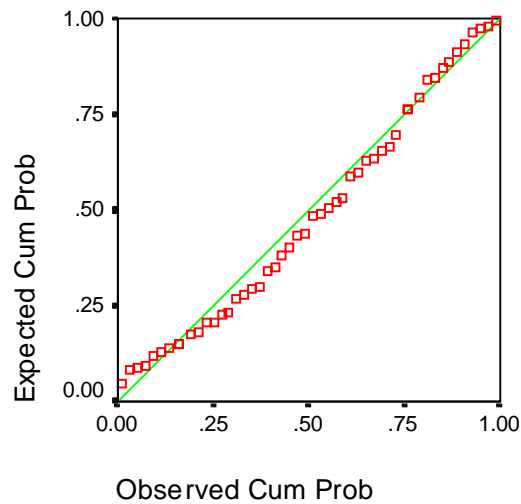
Plots a variable's cumulative proportions against the cumulative proportions of any of a number of test distributions. Probability plots are generally used to determine whether the distribution of a variable matches a given distribution. If the selected variable matches the test distribution, the points cluster around a straight line.

In the case here we are comparing against a normal distribution

VIOLRA85

50 States

Violent Crime Rate Per 100,000 pop



VIOLENT CRIME RATE 1983 PER 100K POP Stem-and-Leaf Plot

Frequency	Stem &	Leaf
1.00	0 .	5
8.00	1 .	22367899
10.00	2 .	1133558899
7.00	3 .	2245779
10.00	4 .	0112557789
4.00	5 .	1557
5.00	6 .	11458
2.00	7 .	17
2.00	8 .	02
1.00	9 .	1

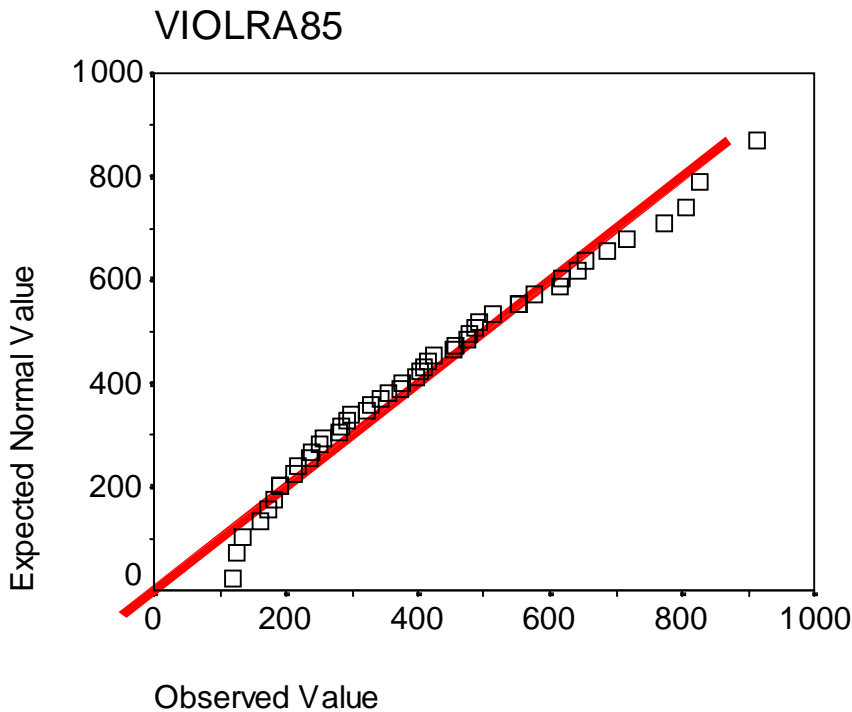
Stem width: 100.0
Each leaf: 1 case(s)

Statistics
 VIOLRA85 VIOLENT CRIME RATE 1983 PER 100K POP

N	Valid	50
	Missing	0
Mean		406.640
Median		386.500
Std. Deviation		206.765
Variance		42751.827
Minimum		54.0
Maximum		914.0
Percentiles	25	238.500
	50	386.500
	75	553.000

QUANTILE PLOTS – From SPSS Help

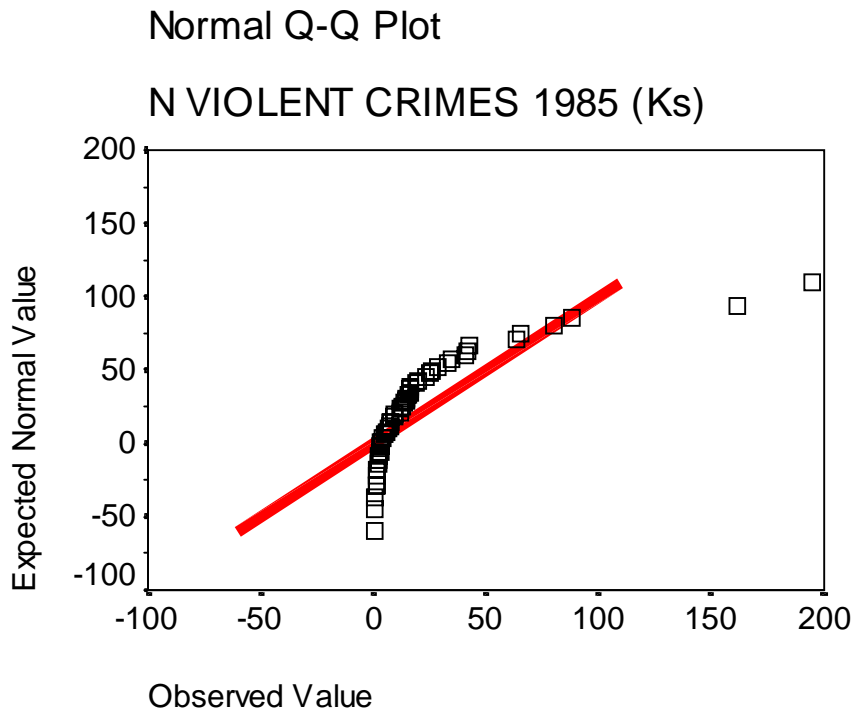
“Plots the quantiles of a variable's distribution against the quantiles of any of a number of test distributions. Probability plots are generally used to determine whether the distribution of a variable matches a given distribution. If the selected variable matches the test distribution, the points cluster around a straight line.”



NOTE

- * Even though SPSS labels these Q-Q plots when you have just one variable it is what Hamilton calls a QUANTILE-NORMAL plot (p. 15)
- * BUT NOTE THAT WITH SPSS the OBSERVED goes on the HORIZONTAL and EXPECTED (given a normal distribution) goes on the VERTICAL. This is the REVERSE of what Hamilton shows on p. 16.
- * So with SPSS positive skew, high outliers will have an UPWARD bowed appearance

AN EVEN MORE SKEWED VARIABLE – THE NUMBER of reported violent crimes in 1985



BOX AND WHISKERS PLOT, REPORTED VIOLENT CRIME COUNT VARIABLE

