

## Sashelp.iris --- Fisher's Iris Data (1936)

## The CONTENTS Procedure

Variables in Creation Order				
#	Variable	Type	Len	Label
1	Species	Char	10	Iris Species
2	SepalLength	Num	8	Sepal Length (mm)
3	SepalWidth	Num	8	Sepal Width (mm)
4	PetalLength	Num	8	Petal Length (mm)
5	PetalWidth	Num	8	Petal Width (mm)

## The First Five Observations Out of 150

Species	SepalLength	SepalWidth	PetalLength	PetalWidth
Setosa	50	33	14	2
Setosa	46	34	14	3
Setosa	46	36	10	2
Setosa	51	33	17	5
Setosa	55	35	13	2

## The Species Variable

## The FREQ Procedure

Iris Species				
Species	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Setosa	50	33.33	50	33.33
Versicolor	50	33.33	100	66.67
Virginica	50	33.33	150	100.00

## The Species Variable

## The FASTCLUS Procedure

Replace=FULL Radius=0 Maxclusters=3 Maxiter=1

Initial Seeds				
Cluster	SepalLength	SepalWidth	PetalLength	PetalWidth
1	77.00000000	38.00000000	67.00000000	22.00000000
2	57.00000000	44.00000000	15.00000000	4.00000000
3	49.00000000	25.00000000	45.00000000	17.00000000

Criterion Based on Final Seeds =	3.7097
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Cluster Summary						
Cluster	Frequency	RMS Std Deviation	Maximum Distance from Seed to Observation	Radius Exceeded	Nearest Cluster	Distance Between Cluster Centroids
1	33	3.8831	12.9226		3	18.3409
2	50	2.7803	12.4803		3	34.2516
3	67	4.1797	18.5320		1	18.3409

Statistics for Variables				
Variable	Total STD	Within STD	R-Square	RSQ/(1-RSQ)
SepalLength	8.28066	4.48242	0.710915	2.459187
SepalWidth	4.35866	3.24819	0.452092	0.825123
PetalLength	17.65298	4.29764	0.941527	16.101961
PetalWidth	7.62238	2.38707	0.903243	9.335201
OVER-ALL	10.69224	3.70171	0.881751	7.456709

Pseudo F Statistic =	548.07
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Approximate Expected Over-All R-Squared =	0.62728
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Cubic Clustering Criterion =	24.559
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WARNING: The two values above are invalid for correlated variables.

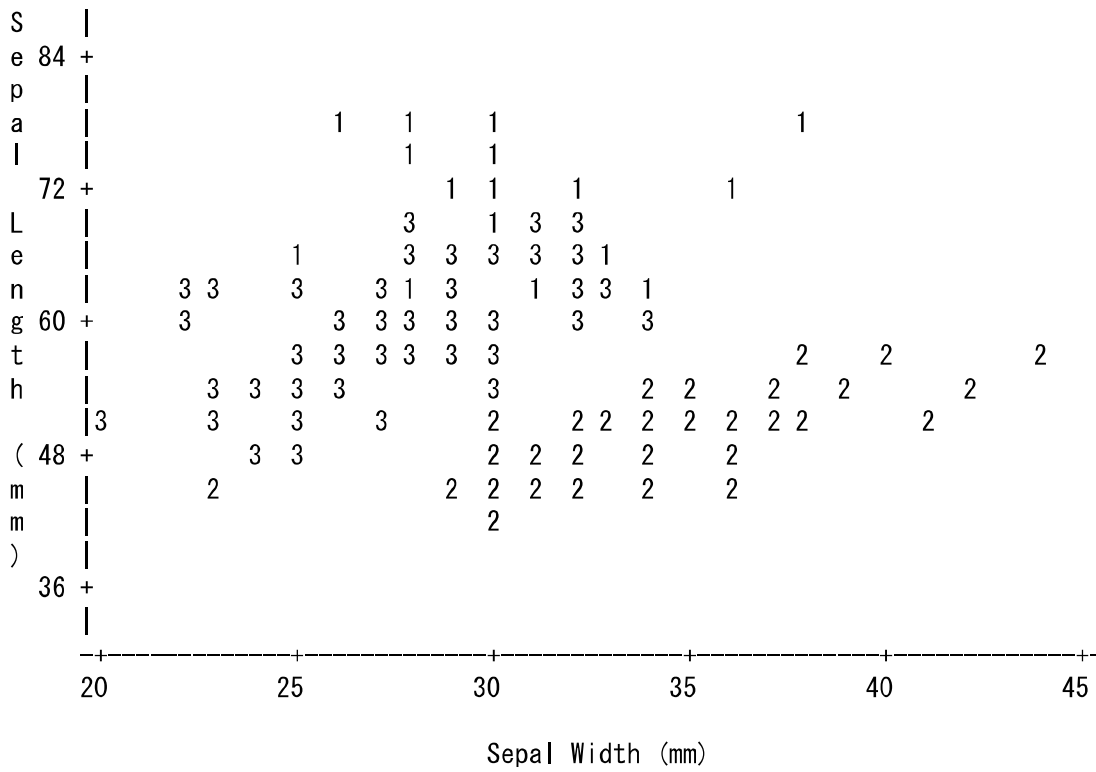
Cluster Means				
Cluster	SepalLength	SepalWidth	PetalLength	PetalWidth
1	69.00000000	30.96969697	58.27272727	21.27272727
2	50.06000000	34.28000000	14.62000000	2.46000000
3	59.47761194	27.61194030	44.52238806	14.53731343

Cluster Standard Deviations				
Cluster	SepalLength	SepalWidth	PetalLength	PetalWidth
1	5.012484414	2.909948974	4.577613511	2.401467354
2	3.524896872	3.790643691	1.736639965	1.053855894
3	4.831582365	2.953966126	5.360795421	3.011736428

## The Species Variable

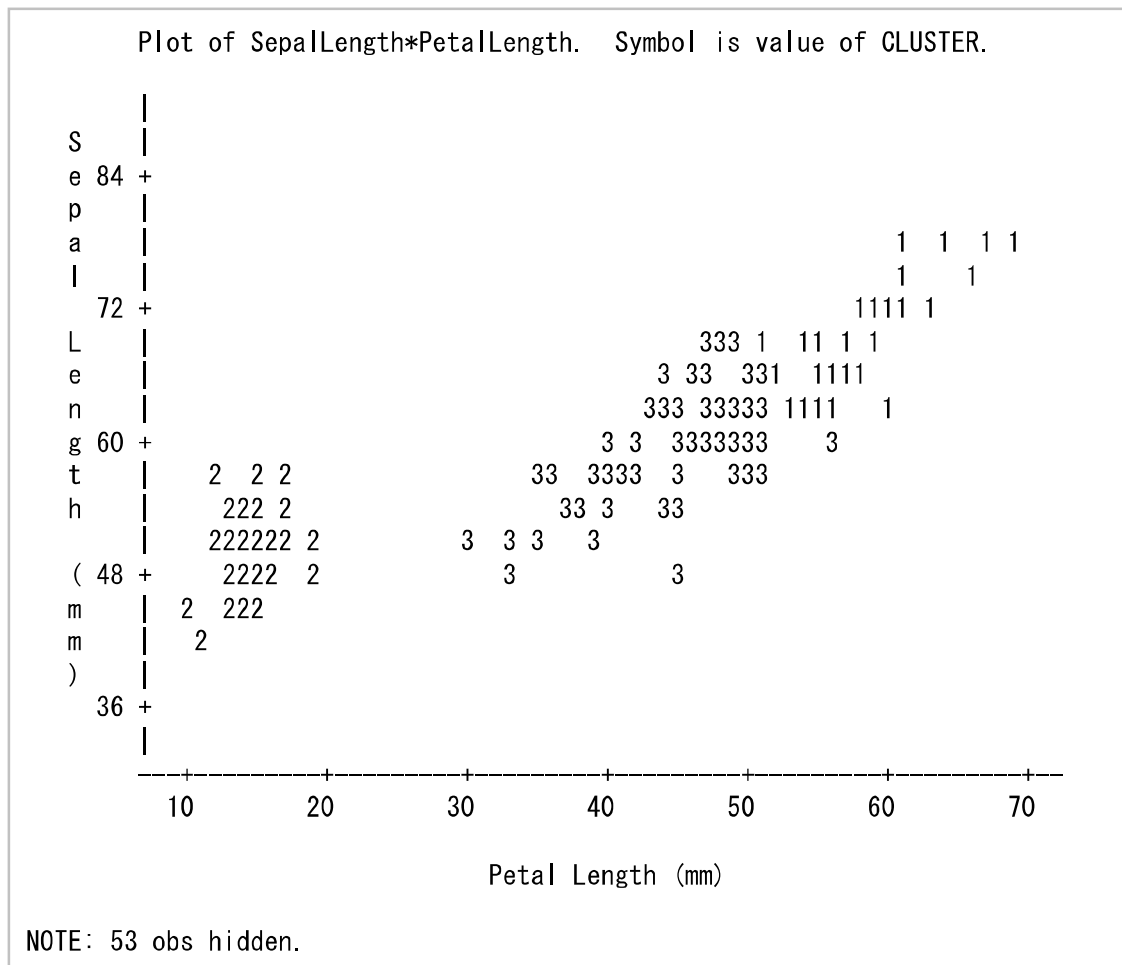
Plot of SepalLength*SepalWidth. Symbol is value of CLUSTER.
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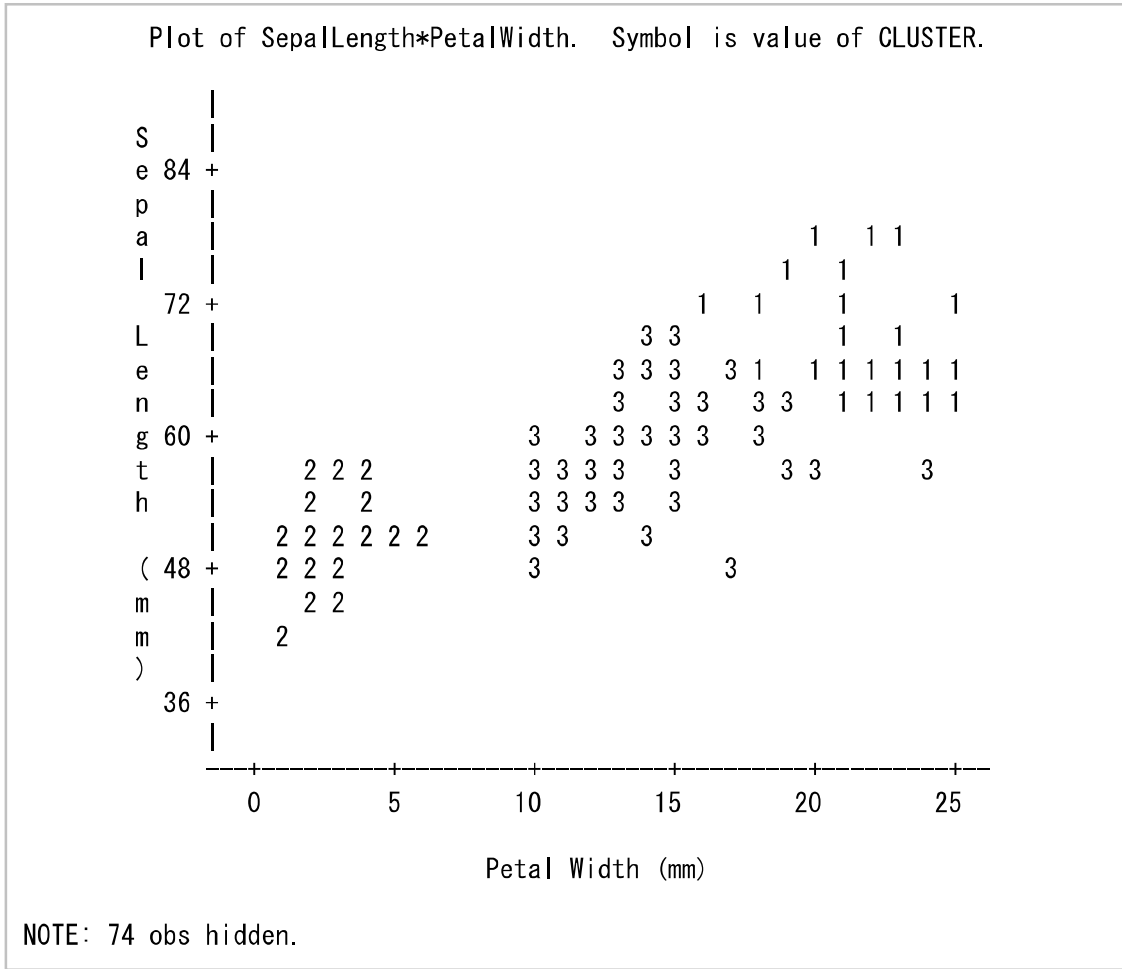
NOTE: 64 obs hidden.

### The Species Variable

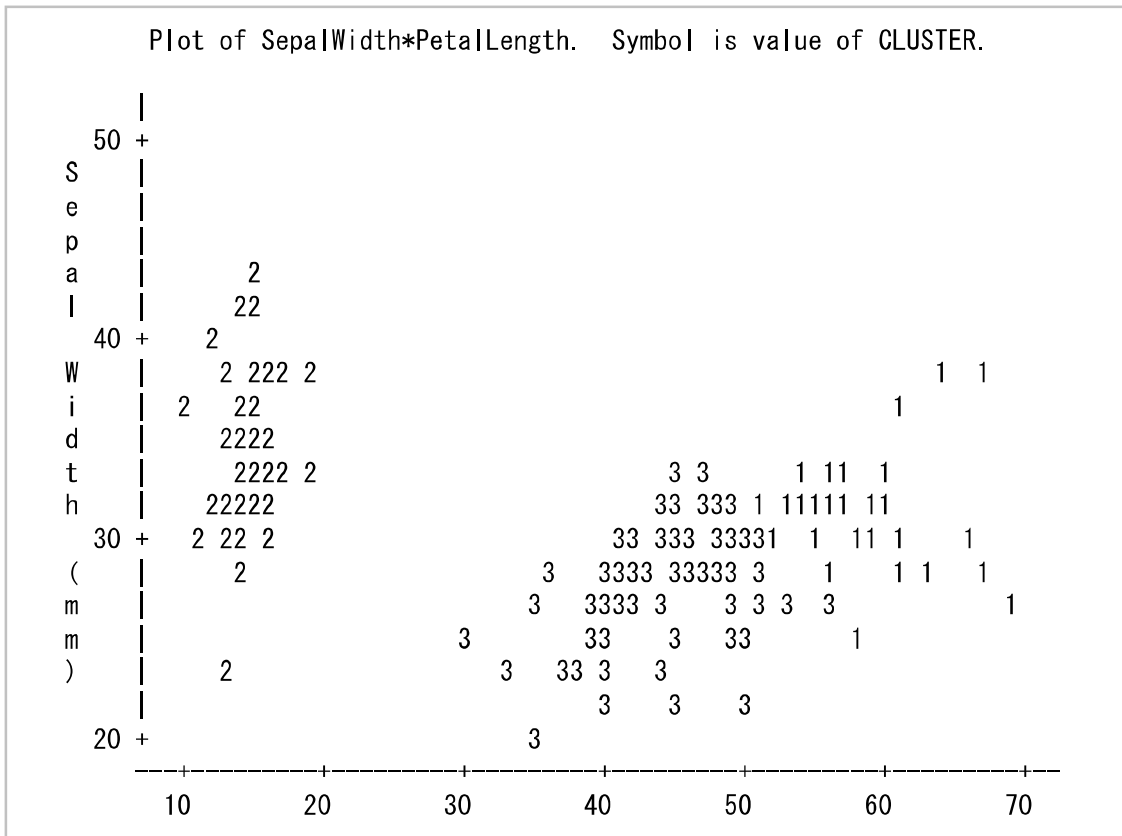


NOTE: 53 obs hidden.

### The Species Variable



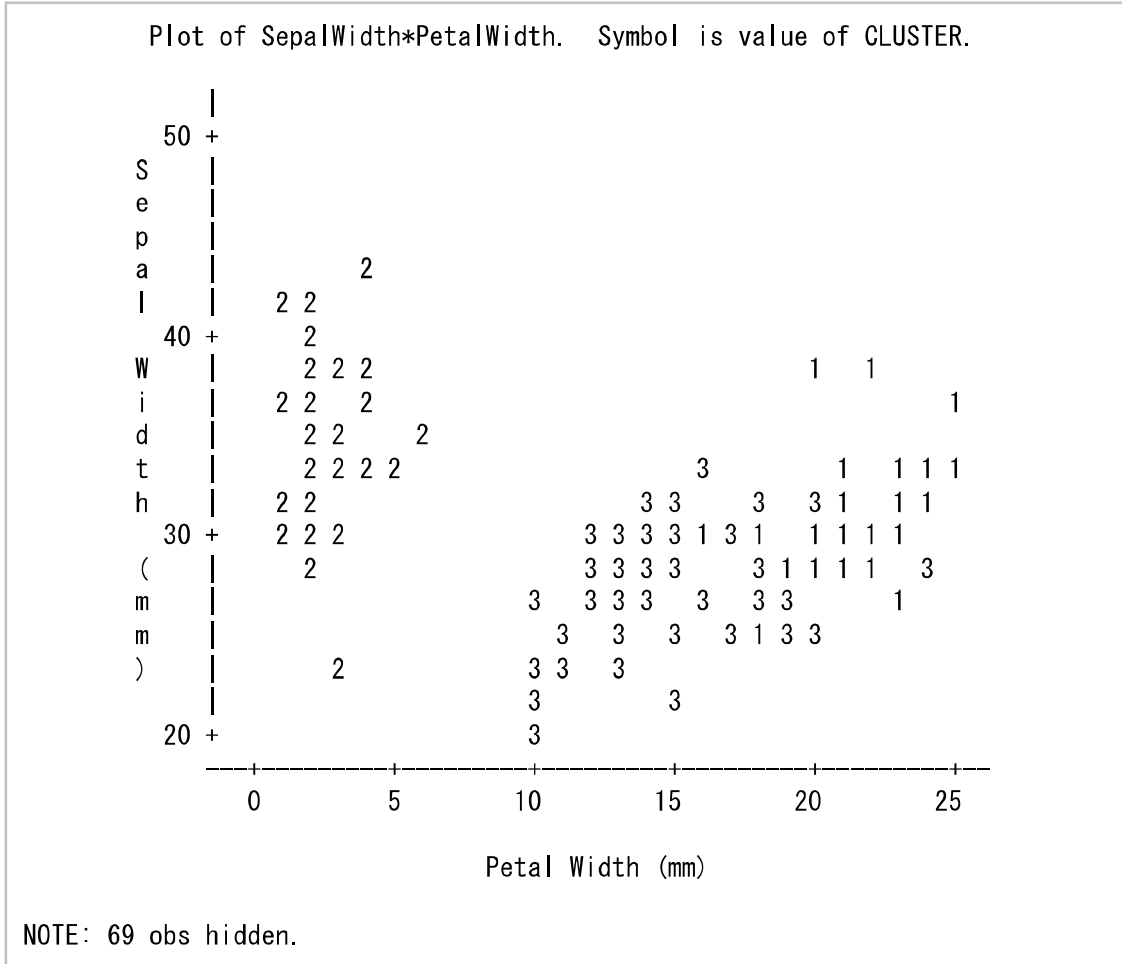
### The Species Variable



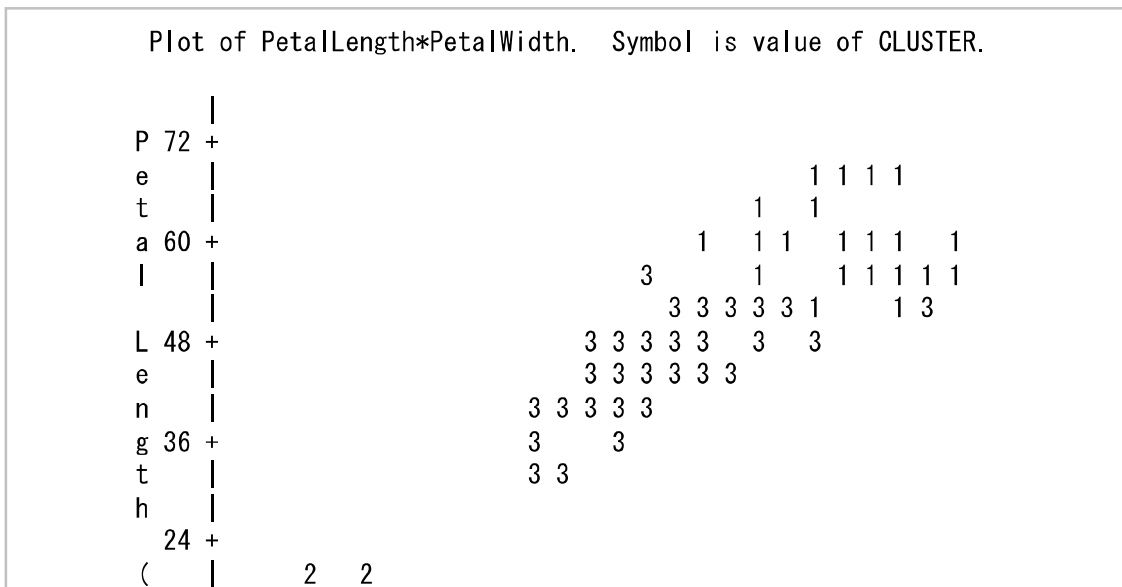
Petal Length (mm)

NOTE: 39 obs hidden.

The Species Variable



The Species Variable



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m | 2 2 2 2 2 2  
m 12 + 2 2 2 2  
) |  
0 +
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Petal Width (mm)

NOTE: 88 obs hidden.

