10/7/24, 2:46 AM Results: Program 3

## K-Means Clustering of Customers Based on Amount and Qty

## The FASTCLUS Procedure Replace=FULL Radius=0 Maxclusters=3 Maxiter=1

Initial Seeds			
Cluster	Amount	Qty	
1	5584.000000	8.000000	
2	2796.000000	4.000000	
3	0.000000	1.000000	

Criterion Based on Final Seeds = 156.6

Cluster Summary						
Cluster	Frequency	RMS Std Deviation	Maximum Distance from Seed to Observation	Radius Exceeded	Nearest Cluster	Distance Between Cluster Centroids
1	6	533.2	869.2		2	3869.2
2	12096	114.1	1522.6		3	651.6
3	116873	145.6	634.1		2	651.6

Statistics for Variables				
Variable	Total STD	Within STD	R-Square	RSQ/(1-RSQ)
Amount	281.21169	201.93021	0.484381	0.939417
Qty	0.31335	0.30760	0.036387	0.037761
OVER-ALL	195.72418	140.54408	0.484381	0.939415

Pseudo F Statistic = 60579.13

Approximate Expected Over-All R-Squared = 0.88889

Cubic Clustering Criterion = -448.336

## WARNING: The two values above are invalid for correlated variables.

Cluster Means			
Cluster	Amount	Qty	
1	5104.906667	8.333333	
2	1235.673978	1.002646	
3	584.056773	0.893885	

Cluster Standard Deviations			
Cluster	Amount	Qty	
1	754.0519519	5.4283208	
2	161.3020010	0.2267580	
3	205.8745151	0.3127830	

