K-means clustering wih k=3

The FASTCLUS Procedure
Replace=FULL Radius=0 Maxclusters=3 Maxiter=100 Converge=0.02

Initial Seeds					
Cluster	age	height	weight	FVC	FEV1
1	-1.611448179	-3.140964509	-2.184514841	-1.783929259	-1.970162763
2	-1.028353049	1.787445596	0.598775606	2.476635535	2.234228008
3	0.429384775	-0.081951340	2.719377852	-0.666138496	-0.270301423

Minimum Distance Between Initial Seeds =	5.125065

Iteration History				
		Relative Change in Cluster Seeds		
Iteration	Criterion	1	2	3
1	1.2009	0.3943	0.4023	0.4971
2	0.5724	0.0154	0.0673	0.0462
3	0.5557	0.0107	0.0192	0.0214
4	0.5538	0.0116	0.00181	0.00533

Convergence criterion is satisfied.

Criterion Based on Final Seeds =	0.5535

Cluster Summary						
Cluster	Frequency	RMS Std Deviation	Maximum Distance from Seed to Observation	Radius Exceeded	Nearest Cluster	Distance Between Cluster Centroids
1	93	0.5448	1.9897		3	3.1441
2	148	0.5523	2.4047		3	2.2250
3	209	0.5620	2.7229		2	2.2250

Statistics for Variables				
Variable	Total STD	Within STD	R-Square	RSQ/(1-RSQ)
age	1.00000	0.71567	0.490103	0.961181
height	1.00000	0.51157	0.739467	2.838283
weight	1.00000	0.57204	0.674224	2.069590
FVC	1.00000	0.47211	0.778105	3.506644

FEV1	1.00000	0.46660	0.783251	3.613637
OVER-ALL	1.00000	0.55529	0.693030	2.257648

Pseudo F Statistic = 504.58

Approximate Expected Over-All R-Squared = 0.27278

Cubic Clustering Criterion = 86.592

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

Cluster Means					
Cluster	**age**	**height**	**weight**	**FVC**	**FEV1**
1	-1.370059335	-1.505470611	-1.442256550	-1.288613997	-1.314855779
2	0.364377547	0.904419647	0.858328485	1.117981222	1.110275231
3	0.351615508	0.029448129	0.033958102	-0.218278082	-0.201144243

| Cluster Standard Deviations					
Cluster	**age**	**height**	**weight**	**FVC**	**FEV1**
1	0.3252468879	0.7931313993	0.4569485339	0.5188068042	0.5206317799
2	0.7537386122	0.4021924051	0.5318813133	0.5106287870	0.5015103217
3	0.8077077312	0.4121214609	0.6410548071	0.4191272102	0.4126050938

Scatter plots of age grouped by cluster

Scatter plots of height grouped by cluster

Scatter plots of weight grouped by cluster

Scatter plots of fvc grouped by cluster

Scatter plots of fev1 grouped by cluster
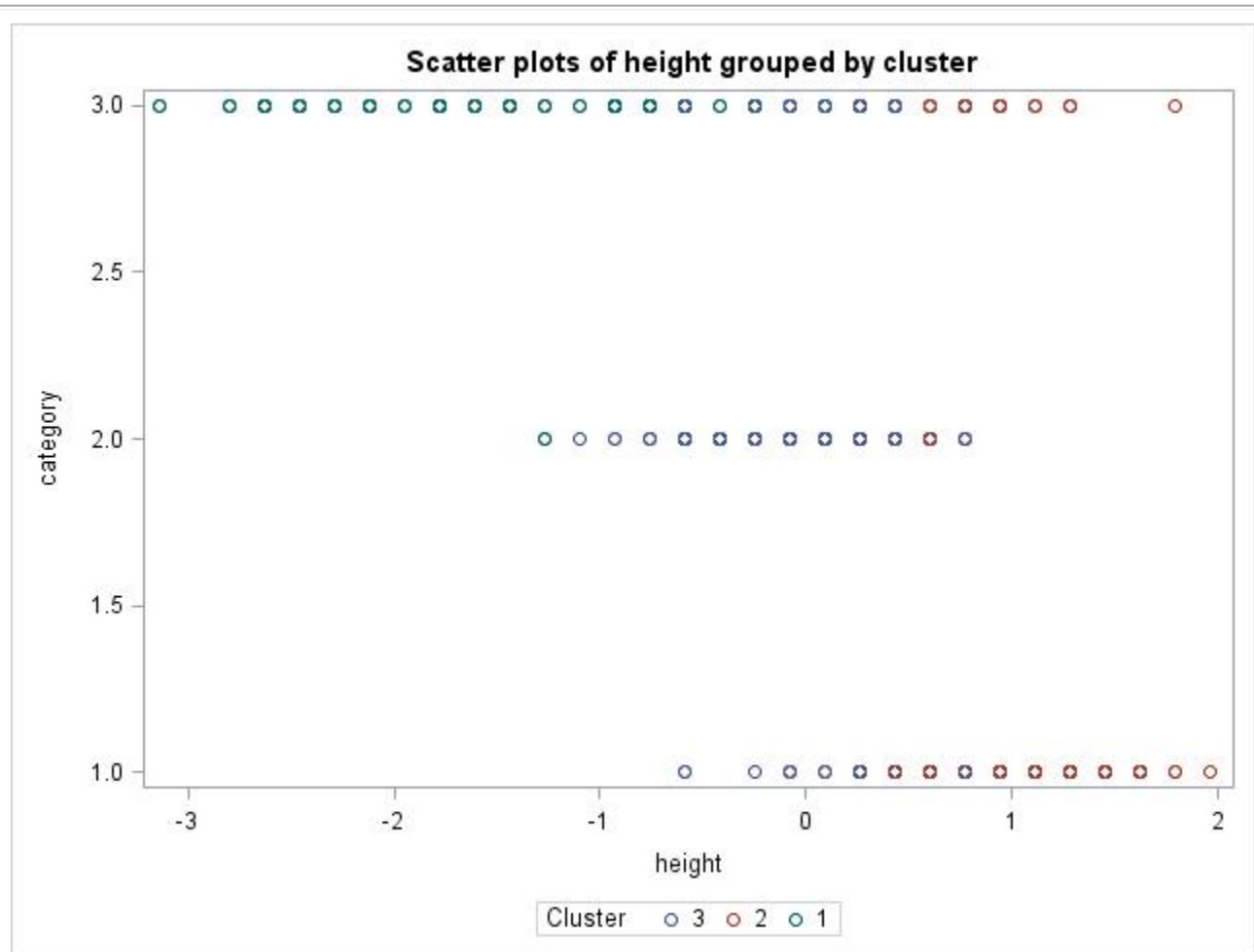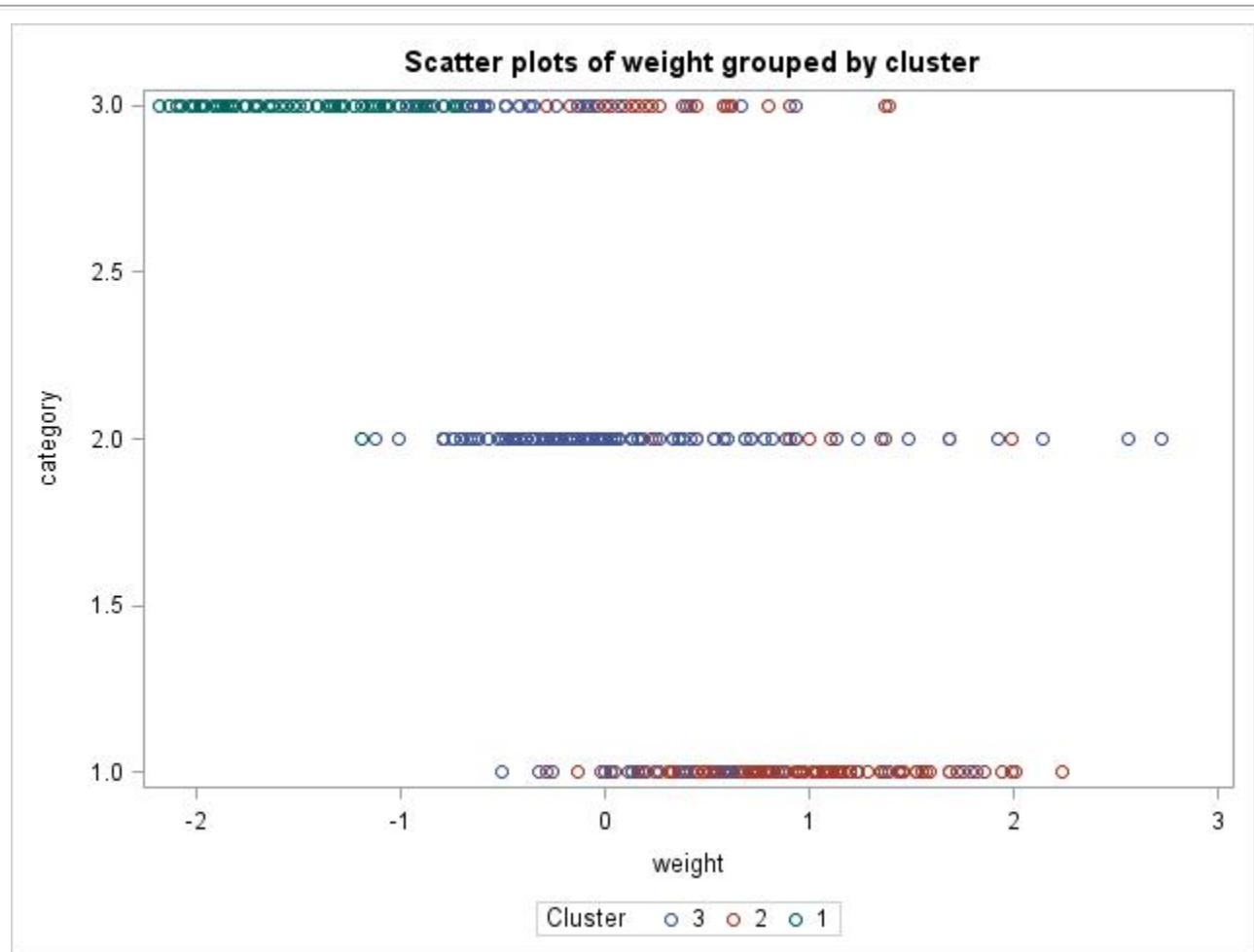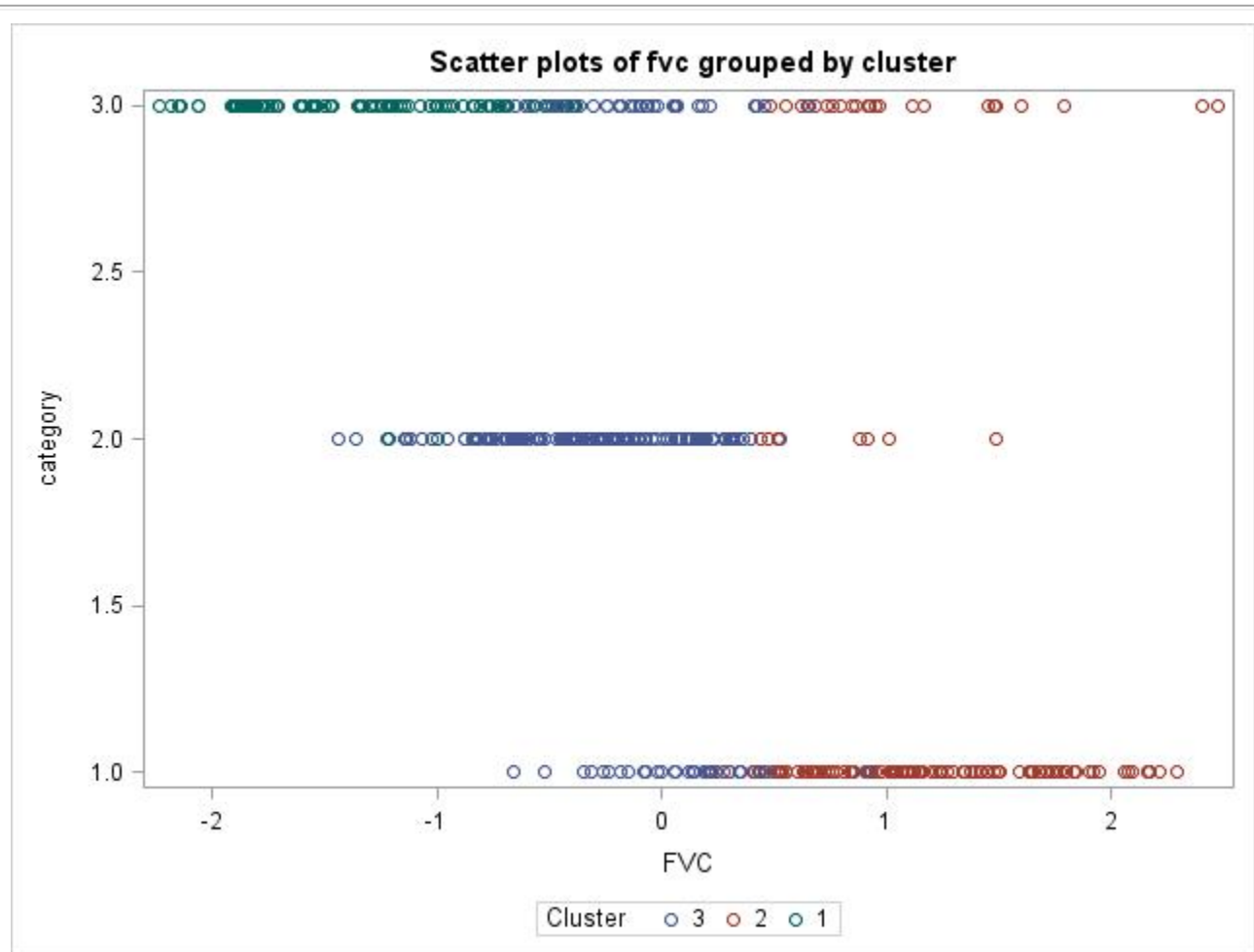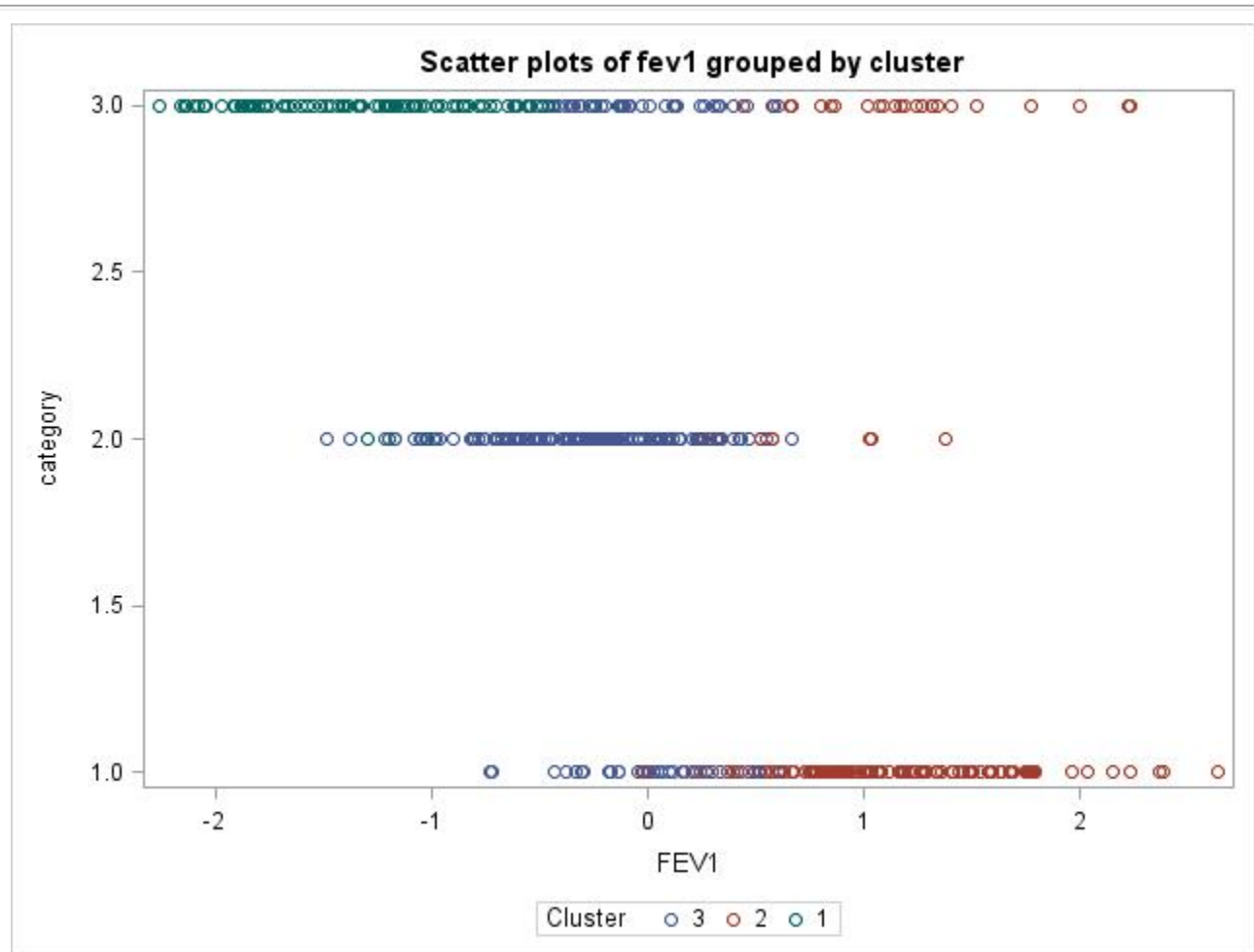
K-means clustering with k=2

The FASTCLUS Procedure
Replace=FULL Radius=0 Maxclusters=2 Maxiter=100 Converge=0.02

Initial Seeds					
Cluster	age	height	weight	FVC	FEV1
1	-1.465674396	-2.631128981	-2.074066807	-2.237525511	-2.261854946
2	-0.080823464	1.787445596	1.725345549	2.079738815	2.364986572

Minimum Distance Between Initial Seeds =	8.713414

Iteration History			
		Relative Change in Cluster Seeds	
Iteration	Criterion	1	2
1	1.4737	0.3245	0.3353
2	0.7056	0.0229	0.0118
3	0.7003	0.0232	0.0105
4	0.6970	0.00888	0.00380

Convergence criterion is satisfied.

Criterion Based on Final Seeds =	0.6961

Cluster Summary						
Cluster	Frequency	RMS Std Deviation	Maximum Distance from Seed to Observation	Radius Exceeded	Nearest Cluster	Distance Between Cluster Centroids
1	134	0.6762	2.6715		2	3.5050
2	316	0.7059	3.3452		1	3.5050

Statistics for Variables				
Variable	Total STD	Within STD	R-Square	RSQ/(1-RSQ)
age	1.00000	0.70236	0.507795	1.031674
height	1.00000	0.68004	0.538572	1.167186
weight	1.00000	0.64853	0.580342	1.382895
FVC	1.00000	0.72464	0.476067	0.908640
FEV1	1.00000	0.72752	0.471889	0.893542

OVER-ALL	1.00000	0.69724	0.514933	1.061571

Pseudo F Statistic =	475.58

Approximate Expected Over-All R-Squared =	0.15381

Cubic Clustering Criterion =	78.300

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

Cluster Means					
Cluster	**age**	**height**	**weight**	**FVC**	**FEV1**
1	-1.093080960	-1.125719101	-1.168557779	-1.058380777	-1.053726876
2	0.463521673	0.477361897	0.495527666	0.448807038	0.446833549

| Cluster Standard Deviations					
Cluster	**age**	**height**	**weight**	**FVC**	**FEV1**
1	0.6298988844	0.8956729364	0.5820173289	0.5948508271	0.6282826646
2	0.7307947874	0.5647993782	0.6746505414	0.7729234295	0.7655716098

Scatter plots of age grouped by cluster

Scatter plots of height grouped by cluster

Scatter plots of weight grouped by cluster

Scatter plots of fvc grouped by cluster

Scatter plots of fev1 grouped by cluster