Assignment I: Output

1. Regression Output (Base responses to Q4. and Q7. on the following output)

The SAS System	08:39	Wednesday,	February	8,	2006	1
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The REG Procedure

Model: MODEL1

Dependent Variable: Price Price

Number of Observations Read 90 Number of Observations Used 90

Analysis of Variance

		Sum of	Mean		
Source	DF	Squares	Square	F Value	Pr > F
Model	11	544331	49485	47.68	<.0001
Error	78	80947	1037.78355		
Corrected Tota	al 89	625278			
I	Root MSE Dependent Mean Coeff Var	32.21465 110.69889 29.10115	R-Square Adj R-Sq	0.8705 0.8523	

Parameter Estimates

		Parameter	Standard		
Label	DF	Estimate	Error	t Value	Pr > t
Intercept	1	-49.58856	29.70399	-1.67	0.0990
Section	1	-3.17360	2.55822	-1.24	0.2185
Lotsize	1	4.05389	0.28753	14.10	<.0001
Bed	1	0.32847	6.97493	0.05	0.9626
Bath	1	27.79720	9.54375	2.91	0.0047
Other	1	11.78519	5.18205	2.27	0.0257
Stories	1	23.87243	10.76648	2.22	0.0295
Fireplaces	1	17.41127	7.43087	2.34	0.0217
Cars	1	12.92185	4.91399	2.63	0.0103
Pool	1	22.95104	32.85194	0.70	0.4869
Fence	1	-24.68501	9.05019	-2.73	0.0079
Age	1	1.40944	0.32916	4.28	<.0001
	Intercept Section Lotsize Bed Bath Other Stories Fireplaces Cars Pool Fence	Intercept 1 Section 1 Lotsize 1 Bed 1 Bath 1 Other 1 Stories 1 Fireplaces 1 Cars 1 Pool 1 Fence 1	Label DF Estimate Intercept 1 -49.58856 Section 1 -3.17360 Lotsize 1 4.05389 Bed 1 0.32847 Bath 1 27.79720 Other 1 11.78519 Stories 1 23.87243 Fireplaces 1 17.41127 Cars 1 12.92185 Pool 1 22.95104 Fence 1 -24.68501	Label DF Estimate Error Intercept 1 -49.58856 29.70399 Section 1 -3.17360 2.55822 Lotsize 1 4.05389 0.28753 Bed 1 0.32847 6.97493 Bath 1 27.79720 9.54375 Other 1 11.78519 5.18205 Stories 1 23.87243 10.76648 Fireplaces 1 17.41127 7.43087 Cars 1 12.92185 4.91399 Pool 1 22.95104 32.85194 Fence 1 -24.68501 9.05019	Label DF Estimate Error t Value Intercept 1 -49.58856 29.70399 -1.67 Section 1 -3.17360 2.55822 -1.24 Lotsize 1 4.05389 0.28753 14.10 Bed 1 0.32847 6.97493 0.05 Bath 1 27.79720 9.54375 2.91 Other 1 11.78519 5.18205 2.27 Stories 1 23.87243 10.76648 2.22 Fireplaces 1 17.41127 7.43087 2.34 Cars 1 12.92185 4.91399 2.63 Pool 1 22.95104 32.85194 0.70 Fence 1 -24.68501 9.05019 -2.73

2. Factor Analysis Output (Base responses to Q5. on the following output)

The FACTOR Procedure

Correlations

		Section	Lotsize	Bed	Bath	Other	Stories
Section	Section	1.00000	0.12266	-0.03803	0.09369	-0.06306	-0.19808
Lotsize	Lotsize	0.12266	1.00000	0.13361	0.15624	0.25163	-0.01289
Bed	Bed	-0.03803	0.13361	1.00000	0.58065	0.36526	0.45579
Bath	Bath	0.09369	0.15624	0.58065	1.00000	0.43647	0.45507
Other	Other	-0.06306	0.25163	0.36526	0.43647	1.00000	0.45464

Stories Stories -0.19808 -0.01289 0.45579 0.45507 0.45464 1.00000 Fireplaces Fireplaces 0.11183 0.08665 0.17048 0.50058 0.24080 0.21692 Pool Pool 0.09423 -0.01328 -0.00835 0.03910 -0.06141 -0.04536 Cars 0.20444 0.12390 0.32566 0.45013 0.18148 0.24389 Fence Fence Age 0.04060 0.01970 0.11910 0.03709 -0.01924 0.05455 -0.83250 -0.00378 0.15386 -0.13017 0.04210 0.15379 Age

Correlations

		Fireplaces	Pool	Cars	Fence	Age
Section	Section	0.11183	0.09423	0.20444	0.04060	-0.83250
Lotsize	Lotsize	0.08665	-0.01328	0.12390	0.01970	-0.00378
Bed	Bed	0.17048	-0.00835	0.32566	0.11910	0.15386
Bath	Bath	0.50058	0.03910	0.45013	0.03709	-0.13017
Other	Other	0.24080	-0.06141	0.18148	-0.01924	0.04210
Stories	Stories	0.21692	-0.04536	0.24389	0.05455	0.15379
Fireplaces	Fireplaces	1.00000	0.08319	0.44306	0.08567	-0.09351
Pool	Pool	0.08319	1.00000	0.09943	0.04929	-0.09548
Cars	Cars	0.44306	0.09943	1.00000	0.02800	-0.28078
Fence	Fence	0.08567	0.04929	0.02800	1.00000	0.00292
Age	Age	-0.09351	-0.09548	-0.28078	0.00292	1.00000

The FACTOR Procedure Initial Factor Method: Iterated Principal Factor Analysis

Partial Correlations Controlling all other Variables

		Section	Lotsize	Bed	Bath	Other	Stories
Section	Section	1.00000	0.22593	0.29974	-0.15156	-0.09084	-0.12655
Lotsize	Lotsize	0.22593	1.00000	-0.03372	0.08603	0.26338	-0.15822
Bed	Bed	0.29974	-0.03372	1.00000	0.48945	0.10544	0.18333
Bath	Bath	-0.15156	0.08603	0.48945	1.00000	0.13835	0.16633
Other	Other	-0.09084	0.26338	0.10544	0.13835	1.00000	0.30525
Stories	Stories	-0.12655	-0.15822	0.18333	0.16633	0.30525	1.00000
Fireplaces	Fireplaces	0.17707	-0.05770	-0.27957	0.41832	0.09138	0.00222
Pool	Pool	0.02050	-0.01857	-0.00891	0.01915	-0.05543	-0.03532
Cars	Cars	-0.15245	0.11583	0.24957	0.04400	-0.08790	0.08727
Fence	Fence	0.02889	0.02268	0.12758	-0.06947	-0.07164	0.04667
Age	Age	-0.83908	0.21296	0.39861	-0.25703	-0.08537	-0.00367

Partial Correlations Controlling all other Variables

		Fireplaces	Pool	Cars	Fence	Age
Section	Section	0.17707	0.02050	-0.15245	0.02889	-0.83908
Lotsize	Lotsize	-0.05770	-0.01857	0.11583	0.02268	0.21296
Bed	Bed	-0.27957	-0.00891	0.24957	0.12758	0.39861
Bath	Bath	0.41832	0.01915	0.04400	-0.06947	-0.25703
Other	Other	0.09138	-0.05543	-0.08790	-0.07164	-0.08537
Stories	Stories	0.00222	-0.03532	0.08727	0.04667	-0.00367
Fireplaces	Fireplaces	1.00000	0.04317	0.33972	0.10428	0.21148
Pool	Pool	0.04317	1.00000	0.06133	0.04268	-0.00992
Cars	Cars	0.33972	0.06133	1.00000	-0.04583	-0.29790
Fence	Fence	0.10428	0.04268	-0.04583	1.00000	0.00134
Age	Age	0.21148	-0.00992	-0.29790	0.00134	1.00000

Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.58738743

Section	Lotsize	Bed	Bath	Other	Stories
0.46571796	0.39933538	0.55753360	0.68717899	0.74915531	0.79399794

Kaiser's Measure of Sampling Adequacy: Overall MSA = 0.58738743

Fireplaces	Pool	Cars	Fence	Age
0.57088032	0.77419228	0.69518782	0.41419797	0.43419290

Prior Communality Estimates: ONE

The FACTOR Procedure Initial Factor Method: Iterated Principal Factor Analysis

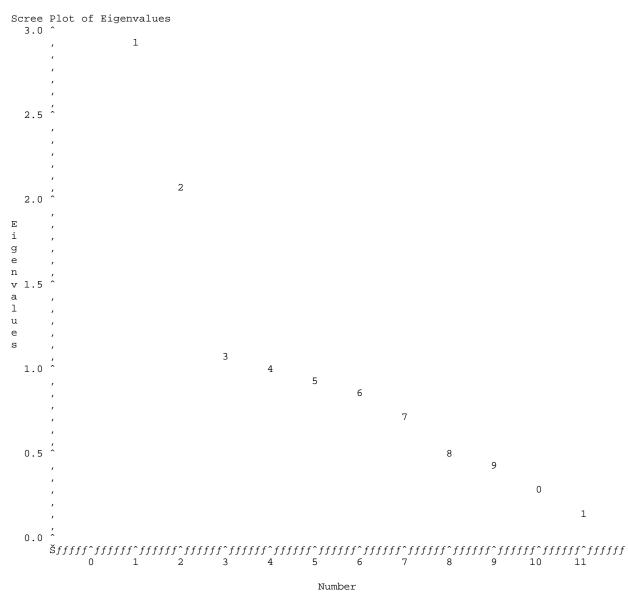
Preliminary Eigenvalues: Total = 11 Average = 1

Eigenvalue	Difference	Proportion	Cumulative
2.93914209	0.85344779	0.2672	0.2672
2.08569430	0.97991863	0.1896	0.4568
1.10577568	0.09884239	0.1005	0.5573
1.00693328	0.05802381	0.0915	0.6489
0.94890948	0.11815391	0.0863	0.7351
0.83075557	0.14085020	0.0755	0.8107
0.68990537	0.15575501	0.0627	0.8734
0.53415035	0.10270269	0.0486	0.9219
0.43144767	0.12106498	0.0392	0.9612
0.31038269	0.19347917	0.0282	0.9894
0.11690352		0.0106	1.0000
	2.93914209 2.08569430 1.10577568 1.00693328 0.94890948 0.83075557 0.68990537 0.53415035 0.43144767 0.31038269	2.93914209	2.93914209 0.85344779 0.2672 2.08569430 0.97991863 0.1896 1.10577568 0.09884239 0.1005 1.00693328 0.05802381 0.0915 0.94890948 0.11815391 0.0863 0.83075557 0.14085020 0.0755 0.68990537 0.15575501 0.0627 0.53415035 0.10270269 0.0486 0.43144767 0.12106498 0.0392 0.31038269 0.19347917 0.0282

⁴ factors will be retained by the MINEIGEN criterion.

The FACTOR Procedure

Initial Factor Method: Iterated Principal Factor Analysis



The FACTOR Procedure
Initial Factor Method: Iterated Principal Factor Analysis

Iteration	Change	Change Communalities									
1	0.6124	0.84652 0.56029	0.75390 0.78382	0.56822 0.85913	0.73252	0.58196	0.59453	0.46905	0.38760		
2	0.3405	0.80419	0.73135 0.77105	0.46637	0.69970	0.43082	0.48736	0.31417	0.04711		
3	0.0528	0.79027	0.73099	0.44647	0.70972	0.37801	0.45911	0.28138	0.02353		
4	0.0169	0.78230	0.73387	0.44304	0.72197	0.36108	0.45008	0.27511	0.02252		
5	0.0084	0.77608	0.73757	0.44246	0.73038	0.35533	0.44641	0.27374	0.02239		
6	0.0068	0.77072	0.74154	0.44231	0.73549	0.35311	0.44462	0.27329	0.02233		
7	0.0060	0.36255 0.76600 0.36185	0.74561 0.76702	0.44223 0.86759	0.73847	0.35207	0.44366	0.27305	0.02229		

8	0.0052	0.76183	0.74973	0.44219	0.74019	0.35148	0.44313	0.27288	0.02225
		0.36145	0.76652	0.87280					
9	0.0046	0.75815	0.75388	0.44217	0.74117	0.35107	0.44282	0.27276	0.02222
		0.36120	0.76602	0.87738					
10	0.0042	0.75491	0.75803	0.44218	0.74173	0.35074	0.44265	0.27266	0.02219
		0.36103	0.76550	0.88141					
11	0.0042	0.75206	0.76218	0.44220	0.74205	0.35046	0.44254	0.27258	0.02216
		0.36091	0.76498	0.88495					
12	0.0042	0.74954	0.76633	0.44223	0.74223	0.35021	0.44248	0.27252	0.02214
		0.36081	0.76444	0.88809					
13	0.0041	0.74733	0.77047	0.44226	0.74234	0.34998	0.44243	0.27246	0.02211
		0.36072	0.76390	0.89086					
14	0.0041	0.74538	0.77460	0.44229	0.74240	0.34976	0.44240	0.27241	0.02209
		0.36065	0.76335	0.89331					
15	0.0041	0.74365	0.77872	0.44232	0.74243	0.34955	0.44237	0.27236	0.02207
		0.36059	0.76279	0.89549					
16	0.0041	0.74212	0.78281	0.44235	0.74245	0.34935	0.44235	0.27232	0.02205
		0.36053	0.76223	0.89741					
17	0.0041	0.74077	0.78689	0.44238	0.74247	0.34915	0.44233	0.27228	0.02204
		0.36047	0.76165	0.89912					
18	0.0041	0.73956	0.79094	0.44240	0.74248	0.34896	0.44231	0.27225	0.02202
		0.36042	0.76107	0.90064					
19	0.0040	0.73849	0.79498	0.44243	0.74249	0.34878	0.44229	0.27222	0.02201
		0.36038	0.76049	0.90199					
20	0.0040	0.73753	0.79899	0.44245	0.74250	0.34861	0.44226	0.27219	0.02199
		0.36034	0.75990	0.90319					
21	0.0040	0.73668	0.80297	0.44247	0.74251	0.34843	0.44224	0.27216	0.02198
		0.36029	0.75931	0.90426					
22	0.0040	0.73591	0.80693	0.44249	0.74252	0.34827	0.44222	0.27214	0.02197
		0.36026	0.75871	0.90522					
23	0.0039	0.73522	0.81087	0.44251	0.74253	0.34810	0.44220	0.27211	0.02196
		0.36022	0.75811	0.90607					

Iteration	Change				Commun	alities			
24	0.0039	0.73460	0.81478	0.44253	0.74254	0.34794	0.44217	0.27209	0.02195
25	0.0039	0.73404	0.81867	0.44254	0.74255	0.34779	0.44215	0.27207	0.02194
26	0.0039	0.73354 0.36012	0.82253 0.75628	0.44256 0.90812	0.74256	0.34764	0.44213	0.27205	0.02193
27	0.0038	0.73308	0.82636 0.75566	0.44258	0.74257	0.34749	0.44211	0.27204	0.02192
28	0.0038	0.73266	0.83017	0.44259	0.74258	0.34734	0.44208	0.27202	0.02191
29	0.0038	0.73228	0.83395	0.44261	0.74259	0.34720	0.44206	0.27201	0.02190
30	0.0038	0.73193	0.83771	0.44262 0.91001	0.74260	0.34706	0.44204	0.27199	0.02189

ERROR: Maximum iterations exceeded.

Eigenvalues of the Reduced Correlation Matrix: Total = 5.85865403 Average = 0.53260491

	Eigenvalue	Difference	Proportion	Cumulative
1	2.43793337	0.60329139	0.4161	0.4161
2	1.83464198	1.00710499	0.3132	0.7293
3	0.82753699	0.06599621	0.1413	0.8705
4	0.76154078	0.46284025	0.1300	1.0005
5	0.29870053	0.17937413	0.0510	1.0515
6	0.11932640	0.07851333	0.0204	1.0719
7	0.04081306	0.06802332	0.0070	1.0788
8	02721025	0.00988956	-0.0046	1.0742
9	03709981	0.09633004	-0.0063	1.0679
10	13342985	0.13066932	-0.0228	1.0451

11 -.26409917 -0.0451 1.0000

The FACTOR Procedure Initial Factor Method: Iterated Principal Factor Analysis

Factor Pattern

		Factor1	Factor2	Factor3	Factor4
Section	Section	0.15400	-0.84043	0.03220	0.02914
Lotsize	Lotsize	0.29894	-0.05766	0.84589	0.17175
Bed	Bed	0.62013	0.23292	-0.04620	0.04093
Bath	Bath	0.85162	0.02509	-0.09646	-0.08611
Other	Other	0.54001	0.18641	0.12157	-0.07693
Stories	Stories	0.55536	0.32685	-0.15226	-0.06000
Fireplaces	Fireplaces	0.50909	-0.07330	-0.08626	0.00208
Pool	Pool	0.04121	-0.12160	-0.05638	0.04722
Cars	Cars	0.56080	-0.19332	-0.07966	-0.04244
Fence	Fence	0.11783	-0.00676	-0.18992	0.83893
Age	Age	-0.16050	0.93325	0.09243	0.06894

Variance Explained by Each Factor

Factor1	Factor2	Factor3	Factor4
2.4379334	1.8346420	0.8275370	0.7615408

Final Communality Estimates: Total = 5.861653

Stories	Other	Bath	Bed		Lotsize		Section
0.44203705	0.34705914	0.74259793	261890 0.	0.4426	83771057	0.8	0.73192925
Age	Fence	rs	Cars	Pool		eplaces	Fir
91000605	5379500 0.9	50 0.7	0.36001450	2189292	0.0	7199183	0.2

The FACTOR Procedure Initial Factor Method: Iterated Principal Factor Analysis

Residual Correlations With Uniqueness on the Diagonal

		Section	Lotsize	Bed	Bath	Other	Stories
Section	Section	0.26807	-0.00408	0.06251	-0.01076	0.00876	-0.00226
Lotsize	Lotsize	-0.00408	0.16229	-0.00629	-0.00052	0.01132	-0.02096
Bed	Bed	0.06251	-0.00629	0.55738	0.04576	-0.00427	0.03069
Bath	Bath	-0.01076	-0.00052	0.04576	0.25740	-0.02298	-0.04594
Other	Other	0.00876	0.01132	-0.00427	-0.02298	0.65294	0.10771
Stories	Stories	-0.00226	-0.02096	0.03069	-0.04594	0.10771	0.55796
Fireplaces	Fireplaces	-0.02546	0.00284	-0.13222	0.06073	-0.00980	-0.05486
Pool	Pool	-0.01387	0.00698	-0.01012	0.00569	-0.05051	-0.03425
Cars	Cars	-0.04059	0.01978	0.02098	-0.03394	-0.07890	-0.01905
Fence	Fence	-0.00156	0.00065	0.00450	-0.00917	0.00602	0.01274
Age	Age	-0.02844	0.00799	0.03746	-0.00205	-0.05113	-0.04390

Residual Correlations With Uniqueness on the Diagonal

		Fireplaces	Pool	Cars	Fence	Age
Section	Section	-0.02546	-0.01387	-0.04059	-0.00156	-0.02844
Lotsize	Lotsize	0.00284	0.00698	0.01978	0.00065	0.00799
Bed	Bed	-0.13222	-0.01012	0.02098	0.00450	0.03746
Bath	Bath	0.06073	0.00569	-0.03394	-0.00917	-0.00205
Other	Other	-0.00980	-0.05051	-0.07890	0.00602	-0.05113
Stories	Stories	-0.05486	-0.03425	-0.01905	0.01274	-0.04390
Fireplaces	Fireplaces	0.72801	0.04834	0.13661	0.00706	0.06443
Pool	Pool	0.04834	0.97811	0.05032	-0.00671	0.02657

Cars	Cars	0.13661	0.05032	0.63999	-0.01891	-0.00007
Fence	Fence	0.00706	-0.00671	-0.01891	0.24620	-0.01214
Age	Age	0.06443	0.02657	-0.00007	-0.01214	0.08999

Root Mean Square Off-Diagonal Residuals: Overall = 0.04208005

Section	Lotsize	Bed	Bath	Other	Stories
0.02724232	0.01066102	0.05142992	0.03132023	0.04886203	0.04661708

Root Mean Square Off-Diagonal Residuals: Overall = 0.04208005

Fireplaces	Pool	Cars	Fence	Age
0.07080426	0.03117627	0.05636653	0.00951652	0.03438954

The FACTOR Procedure
Initial Factor Method: Iterated Principal Factor Analysis

Partial Correlations Controlling Factors

		Section	Lotsize	Bed	Bath	Other	Stories
Section	Section	1.00000	-0.01956	0.16173	-0.04096	0.02094	-0.00584
Lotsize	Lotsize	-0.01956	1.00000	-0.02092	-0.00253	0.03478	-0.06967
Bed	Bed	0.16173	-0.02092	1.00000	0.12081	-0.00708	0.05503
Bath	Bath	-0.04096	-0.00253	0.12081	1.00000	-0.05606	-0.12121
Other	Other	0.02094	0.03478	-0.00708	-0.05606	1.00000	0.17845
Stories	Stories	-0.00584	-0.06967	0.05503	-0.12121	0.17845	1.00000
Fireplaces	Fireplaces	-0.05763	0.00827	-0.20756	0.14029	-0.01421	-0.08607
Pool	Pool	-0.02708	0.01752	-0.01371	0.01133	-0.06320	-0.04636
Cars	Cars	-0.09799	0.06138	0.03513	-0.08363	-0.12206	-0.03187
Fence	Fence	-0.00608	0.00324	0.01214	-0.03641	0.01501	0.03439
Age	Age	-0.18308	0.06615	0.16727	-0.01347	-0.21092	-0.19591

Partial Correlations Controlling Factors

		Fireplaces	Pool	Cars	Fence	Age
Section	Section	-0.05763	-0.02708	-0.09799	-0.00608	-0.18308
Lotsize	Lotsize	0.00827	0.01752	0.06138	0.00324	0.06615
Bed	Bed	-0.20756	-0.01371	0.03513	0.01214	0.16727
Bath	Bath	0.14029	0.01133	-0.08363	-0.03641	-0.01347
Other	Other	-0.01421	-0.06320	-0.12206	0.01501	-0.21092
Stories	Stories	-0.08607	-0.04636	-0.03187	0.03439	-0.19591
Fireplaces	Fireplaces	1.00000	0.05729	0.20014	0.01668	0.25173
Pool	Pool	0.05729	1.00000	0.06360	-0.01367	0.08956
Cars	Cars	0.20014	0.06360	1.00000	-0.04764	-0.00029
Fence	Fence	0.01668	-0.01367	-0.04764	1.00000	-0.08156
Age	Age	0.25173	0.08956	-0.00029	-0.08156	1.00000

Root Mean Square Off-Diagonal Partials: Overall = 0.09547320

Stories	Other	Bath	Bed	Lotsize	Section
0.10226683	0.10024476	0.07901131	0.10812012	0.03926658	0.08712108

Root Mean Square Off-Diagonal Partials: Overall = 0.09547320

Age	Fence	Cars	Pool	Fireplaces
0.15065222	0.03509412	0.09158783	0.04799394	0.13444256

Plot of Factor Pattern for Factor1 and Factor2

	torl
	1
	D
	7
I G .	E F
	4
В.	3
A J	F 1 a
H -1987654321	c 0 .1 .2 .3 .4 .5 .6 .7 .8 .9 1.0t
	0
	К 2
	4
	5
	6
	7
	8
	9
_	1
Section=A Lotsize=B Bed=C Bath=D Pool=H Cars=I Fence=J Age=K The SAS	Other=E Stories=F Fireplaces=G

Plot of Factor Pattern for Factor1 and Factor3

			Factor1 1			
			.9 D .8			
			.7			
			C.6 F I E G .5			
			. 4			
			.3		В	
	-198-	.76543	.2 A J .1 H 21 0 .1 .	2 .3 .4 .5 .6		
			1 K 2		o r 3	
			3			
			4			
			5			
			6			
			7			
			8			
			9			
			-1			
Section=A Pool=H	Lotsize=B Cars=I	Bed=C Fence=J	Bath=D Age=K	Other=E	Stories=F	Fireplaces=G

Plot of Factor Pattern for Factor1 and Factor4

			Factor1			
			1			
			.9 D			
			.8			
			.7			
			.6C EF			
			.G			
			. 4			
			.3 B			
			. 2			
			A .1		F J a	
	-198-	.76543-	H 21 0 .1 .	2 .3 .4 .5 .6	c .7 .8 .9 1.0t	
			1		o r	
			K 2		4	
			3			
			4			
			5			
			6			
			7			
			8			
			9			
			-1			
Section=A Pool=H	Lotsize=B Cars=F	Bed=C Fence=J	Bath=D Age=K	Other=E	Stories=F	Fireplaces=G

Plot of Factor Pattern for Factor2 and Factor3

			Factor2			
			.9			
			.8			
			.7			
			.6			
			.5			
			.4 F			
			.3 C			
			.2 E		F	
	1 0 0		.1 D	0 2 4 5 6	a c	
	-198-	./6543	J1 U .1 G H.1	.2 .3 .4 .5 .6	B o	
			I2		3	
			3			
			4			
			5			
			6			
			7			
			8 A			
			9			
			-1			
Section=A Pool=H	Lotsize=B Cars=I	Bed=C Fence=J	Bath=D Age=K	Other=E	Stories=F	Fireplaces=G

Plot of Factor Pattern for Factor2 and Factor4

			Factor2 1 K .9			
			.8			
			.7			
			.6			
			.5			
			. 4			
			F .3			
			C E .2			
			.1		F a	
	-198-	.76543		.2 .3 .4 .5 .6	c .7 .8J.9 1.0t	
			G F 1H	3	o r	
			1.2		4	
			3			
			4			
			5			
			6			
			7			
			8 A 9			
			-1			
Section=A Pool=H	Lotsize=B Cars=I	Bed=C Fence=J	Bath=D Age=K	Other=E	Stories=F	Fireplaces=G

Plot of Factor Pattern for Factor3 and Factor4

			Factor3	1		
			.9	_		
			.8	В		
			.7			
			.6			
			. 5			
			. 4			
			.3			
			. 2		F	
			E .1 K A		a C	
	-198-	.76543	C	2 3 4 5 6	5 .7 .8 .9 1.0t	
			DI.G F		r 4	
			2		J	
			3			
			4			
			5			
			6			
			7			
			8			
			9			
			-1			
Section=A Pool=C	Lotsize=B Cars=I	Bed=C Fence=J	Bath=D Age=K	Other=E	Stories=F	Fireplaces=G

Orthogonal Transformation Matrix

	1	2	3	4
1	0.96164	-0.18832	0.18812	0.06633
2	0.20203	0.97528	-0.07412	0.05012
3	-0.15046	0.11492	0.95880	-0.21179
4	-0.10862	-0.01238	0.19954	0.97377

Rotated Factor Pattern

		Factor1	Factor2	Factor3	Factor4
Section	Section	-0.02971	-0.84532	0.12795	-0.01035
Lotsize	Lotsize	0.12990	-0.01745	0.90582	0.00503
Bed	Bed	0.64590	0.10457	0.06327	0.10244
Bath	Bath	0.84788	-0.14593	0.04868	-0.00568
Other	Other	0.54702	0.09503	0.18898	-0.05550
Stories	Stories	0.62951	0.19744	-0.07771	0.02704
Fireplaces	Fireplaces	0.48750	-0.17730	0.01891	0.05039
Pool	Pool	0.01841	-0.13342	-0.02787	0.05456
Cars	Cars	0.51683	-0.30278	0.03498	0.00305
Fence	Fence	0.04939	-0.06099	0.00797	0.86462
Age	Age	0.01281	0.95017	0.00301	0.08368

Variance Explained by Each Factor

Factor1	Factor2	Factor3	Factor4
2.3570750	1.8425723	0.8874346	0.7745712

Final Communality Estimates: Total = 5.861653

Stories	Other	Bath	l	Bed		Lotsize		Section
0.44203705	0.34705914	74259793	0.7	44261890	0.4	3771057	0.8	0.73192925
Age	Fence		Cars		Pool		eplaces	Fir
91000605	5379500 0.9	0.7	36001450	0.3	2189292	0.0	7199183	0.2

Plot of Factor Pattern for Factor1 and Factor2

			Fa	ctorl			
				1			
			D	. 9			
				. 8			
				. 7			
				C F			
				E			
		I	G	. 5			
				. 4			
				. 3			
				. 2			
			1	3		F	
			J	. 1		a C	
	-198- A	.76543	2H.1	0 .1 .:	2 .3 .4 .5	.6 .7 .8 .9K1.0t	
			-	. 1		r	
			-	. 2		2	
			_	. 3			
				. 4			
			-	. 5			
			-	. 6			
			_	. 7			
			_	. 8			
			-	. 9			
				-1			
Section=A Pool=H	Lotsize=B Cars=I	Bed=C Fence=J	Bath=1 Age=K)	Other=E	Stories=F	Fireplaces=G

Plot of Factor Pattern for Factor1 and Factor3

			Factor1			
			.9 D .8			
			.7 F C .6	E		
			.GI .4			
			.3			
			.2		B F a	
	-198-	.76543	A	.2 .3 .4 .5 .6	0	
			1 2		r 3	
			3 4			
			4			
			6 7			
			8			
			9 -1			
Section=A Pool=H	Lotsize=B Cars=I	Bed=C Fence=J	Bath=D Age=K	Other=E	Stories=F	Fireplaces=G

Plot of Factor Pattern for Factor1 and Factor4

			Factor1			
			.9 D			
			.8			
			.7 F C .6			
			E .IG			
			. 4			
			.3			
			.2 B .1		F a	
	-198-	.76543		.2 .3 .4 .5 .6	J c .7 .8 .9 1.0t	
			1		r 4	
			2		•	
			3			
			4			
			5			
			6			
			7			
			8			
			9			
			-1			
Section=A Pool=H	Lotsize=B Cars=I	Bed=C Fence=J	Bath=D Age=K	Other=E	Stories=F	Fireplaces=G

Plot of Factor Pattern for Factor2 and Factor3

			Factor2			
			1 K			
			. 9			
			.8			
			.7			
			.6			
			.5			
			. 4			
			.3			
			F .2			
			.1C E		F a c	
	-198-	.76543		2 .3 .4 .5 .6	.7 .8 .B 1.0t	
			Ј 1		o r	
			H D		3	
			G			
			3I			
			4			
			5			
			6			
			7			
			8			
			A 9			
			-1			
Section=A Pool=H	Lotsize=B Cars=I	Bed=C Fence=J	Bath=D Age=K	Other=E	Stories=F	Fireplaces=G

Plot of Factor Pattern for Factor2 and Factor4

Section=A

Pool=H

		Factor2			
		1 K			
		. 9			
		.8			
		. 7			
		. 6			
		. 5			
		.4			
		.3			
		.F			
		E.1 C		F a	
				C	
-198-	7654-	.321 В .1 .	2 .3 .4 .5 .6	5 .7 .8 .9 1.0t J o	
		1		r	
		D H 2G		4	
		I			
		4			
		5			
		6			
		7			
		8			
		A 9			
		-1			
Lotsize=B Cars=I	Bed=C Fence=J	Bath=D Age=K	Other=E	Stories=F	Fireplaces=G

Plot of Factor Pattern for Factor3 and Factor4

			Factor3			
			.B			
			.8			
			.7			
			.6			
			.5			
			. 4			
			.3			
			E.2			
			A		F	
			.1 DI C		a	
	-1 9 8 -	.76543	21 OGK1 .	2 . 3 . 4 . 5 . 6	С .7.8.Т.9.1.0+	
	1 .7 .0	., .0 .5 .1 .5	H	2 .3 .1 .3 .0	0	
			F		r	
			2		4	
			3			
			4			
			5			
			6			
			7			
			8			
			9			
			-1			
Section=A Pool=H	Lotsize=B Cars=I	Bed=C Fence=J	Bath=D Age=K	Other=E	Stories=F	Fireplaces=G

3. Regression of Sale Price on Factors (Base responses to Q6. on the following output)

The REG Procedure Model: MODEL1 Dependent Variable: Price Price

Number of Observations Read 90 Number of Observations Used 90

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model Error Corrected Tot	4 85 al 89	525988 99290 625278	131497 1168.11270	112.57	<.0001
	Root MSE Dependent Mean Coeff Var	34.17766 110.69889 30.87444	R-Square Adj R-Sq	0.8412 0.8337	

Parameter Estimates

			Parameter	Standard		
Variable	Label	DF	Estimate	Error	t Value	Pr > t
Intercept	Intercept	1	110.69889	3.60264	30.73	<.0001
Factor1		1	48.49765	3.94161	12.30	<.0001
Factor2		1	33.47961	3.75454	8.92	<.0001
Factor3		1	57.20019	3.97192	14.40	<.0001
Factor4		1	-8.30845	4.16161	-2.00	0.0491