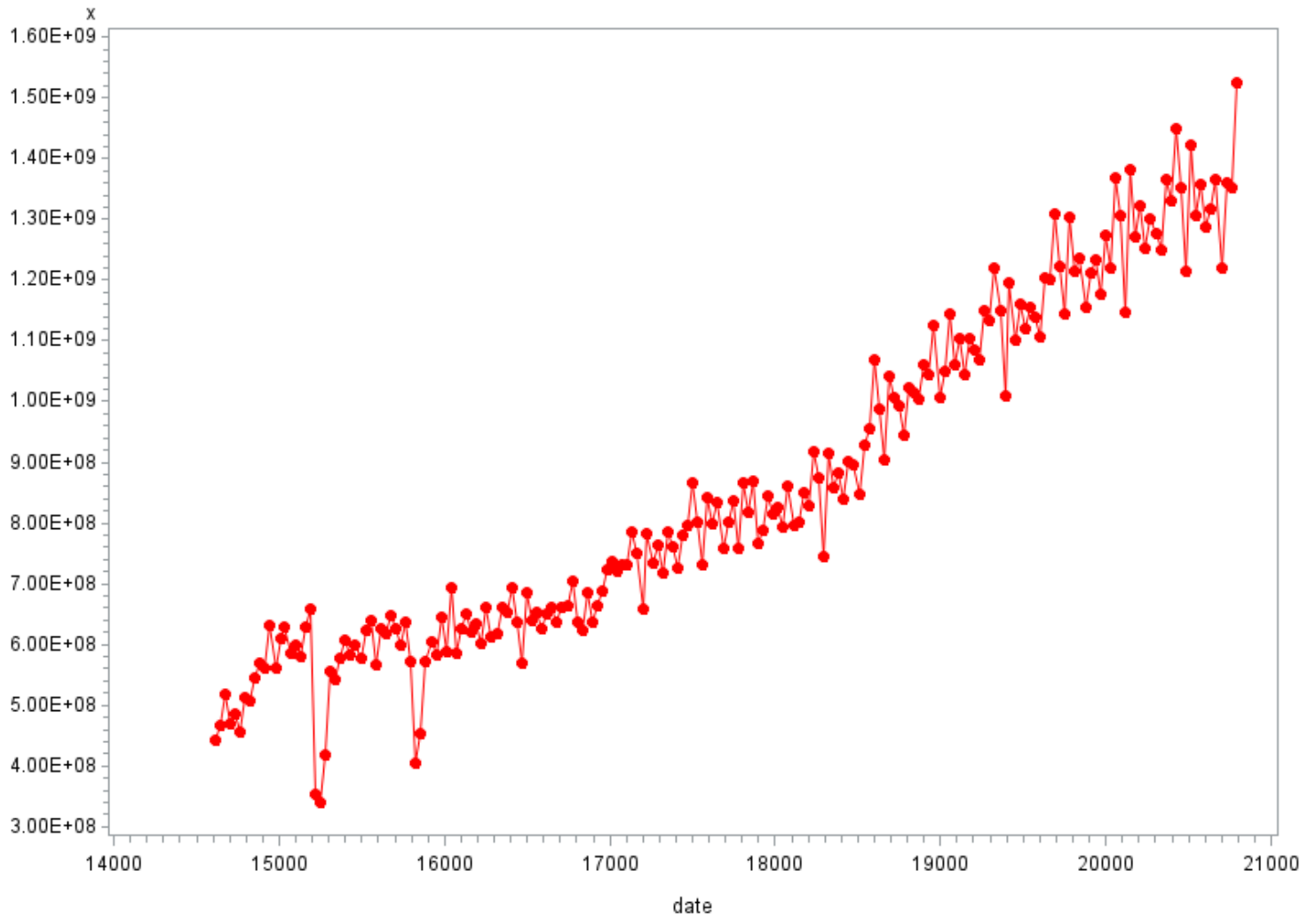
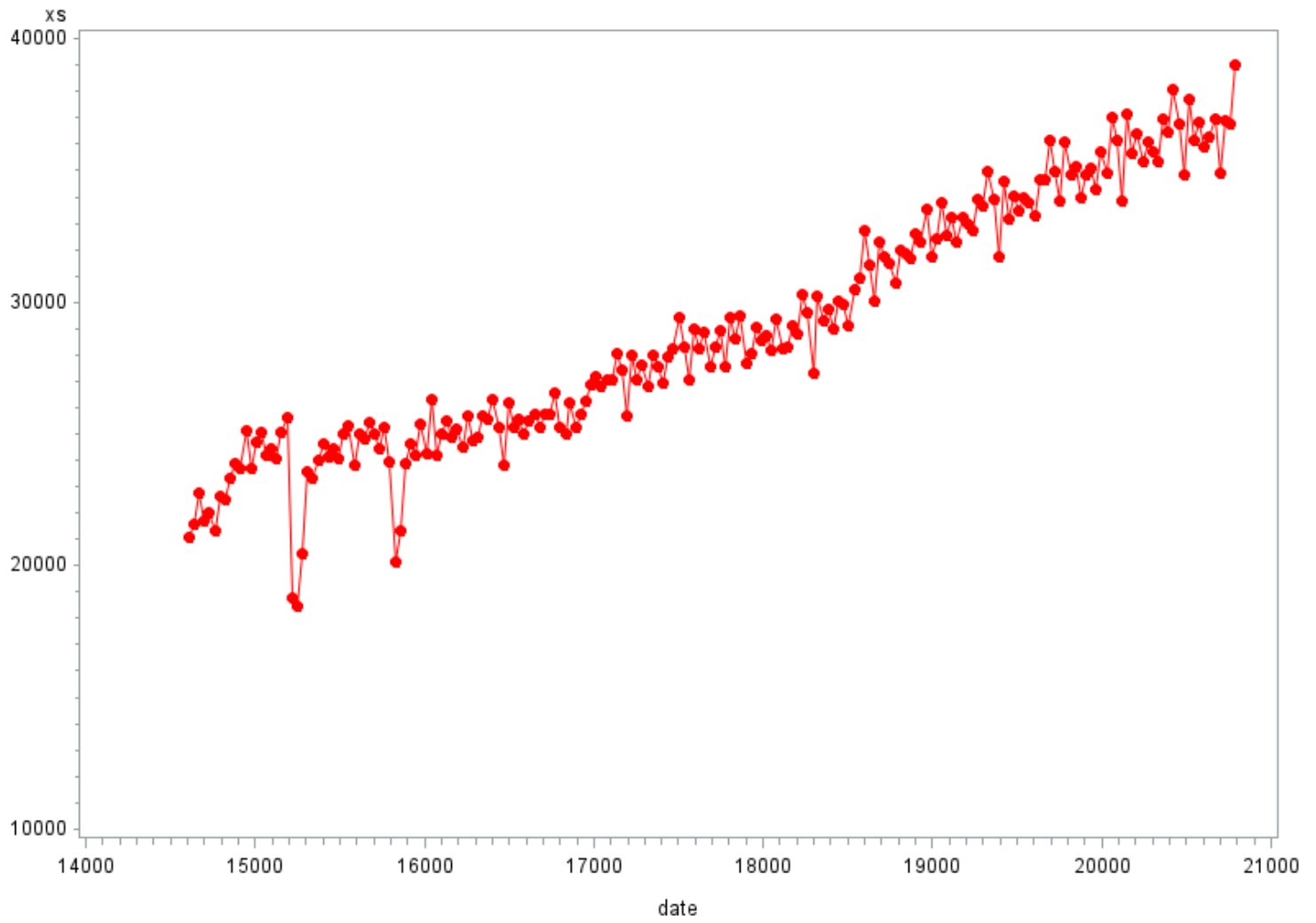


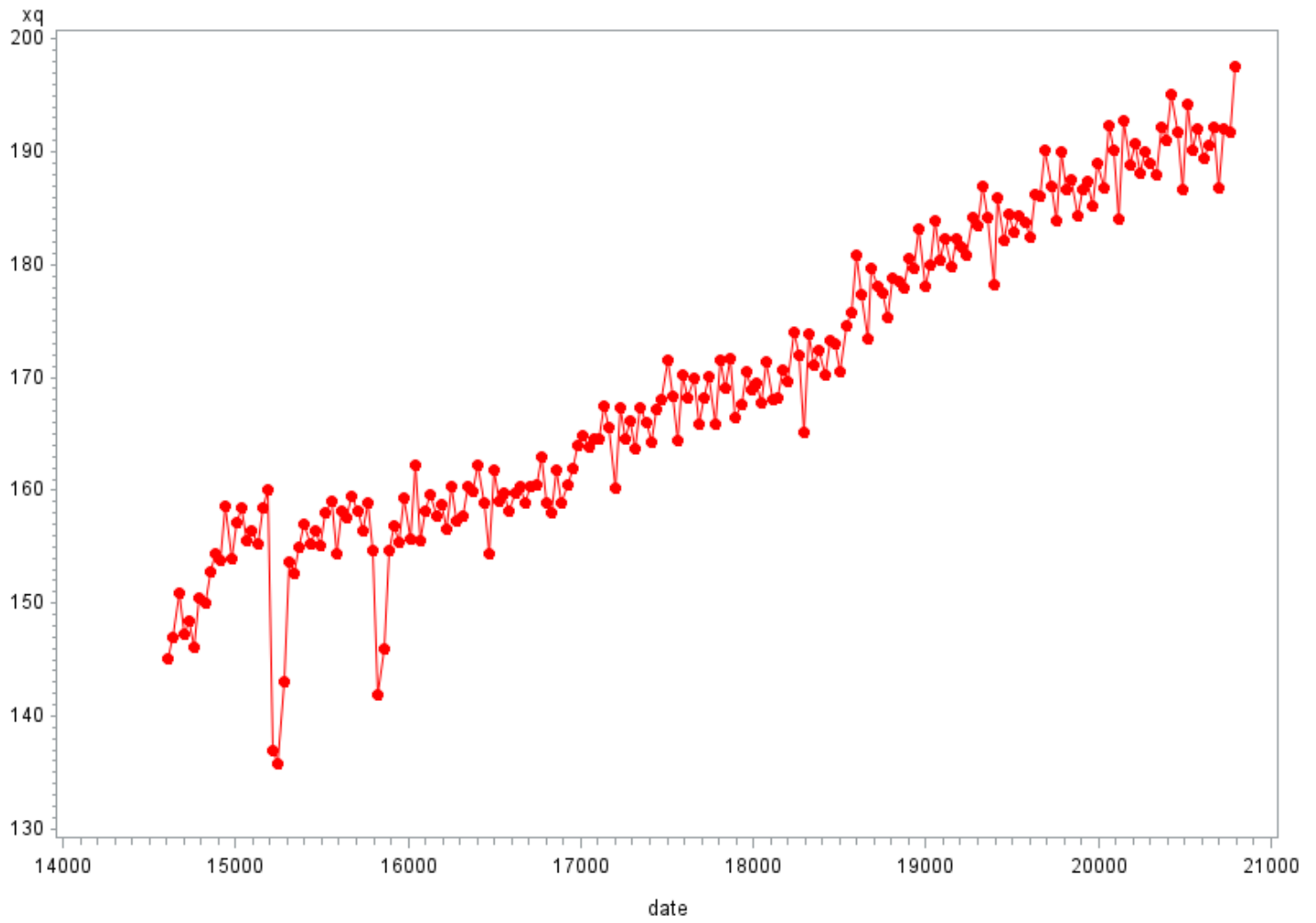
Time series plot of different x



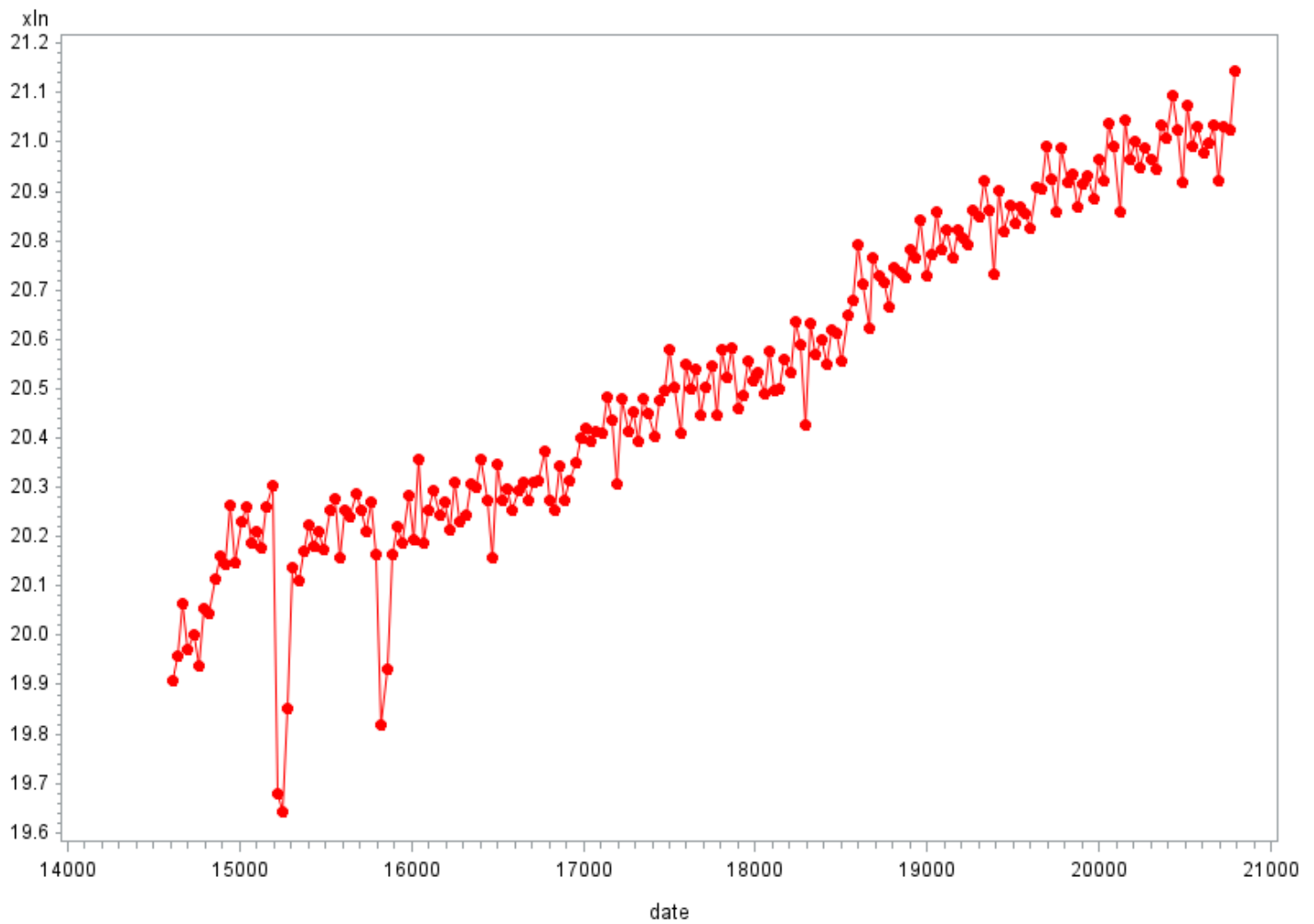
Time series plot of different x



Time series plot of different x



Time series plot of different x



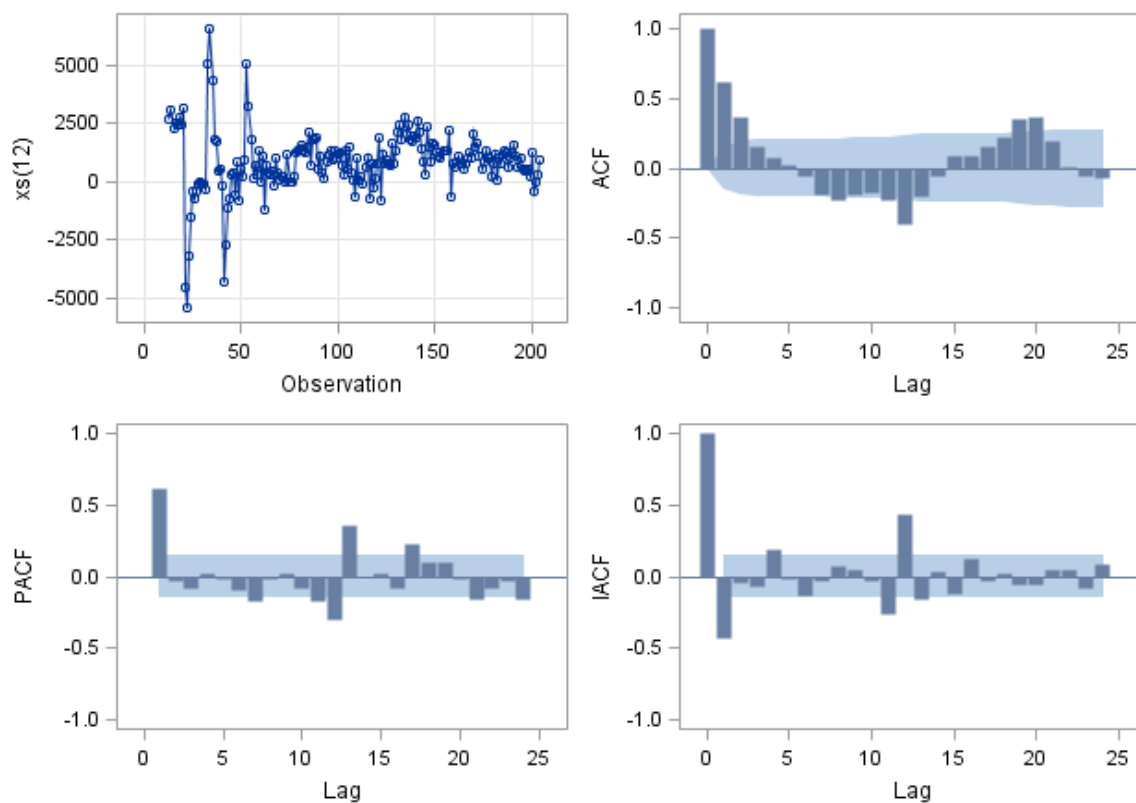
Time series plot of different x

The ARIMA Procedure

Name of Variable = xs	
Period(s) of Differencing	12
Mean of Working Series	872.6788
Standard Deviation	1345.43
Number of Observations	192
Observation(s) eliminated by differencing	12

Autocorrelation Check for White Noise									
To Lag	Chi-Square	DF	Pr > ChiSq	Autocorrelations					
6	105.09	6	<.0001	0.613	0.358	0.159	0.072	0.021	-0.056
12	180.64	12	<.0001	-0.187	-0.224	-0.188	-0.175	-0.236	-0.403
18	208.21	18	<.0001	-0.200	-0.064	0.086	0.090	0.159	0.214
24	274.20	24	<.0001	0.356	0.364	0.194	0.006	-0.060	-0.067

Trend and Correlation Analysis for xs(12)



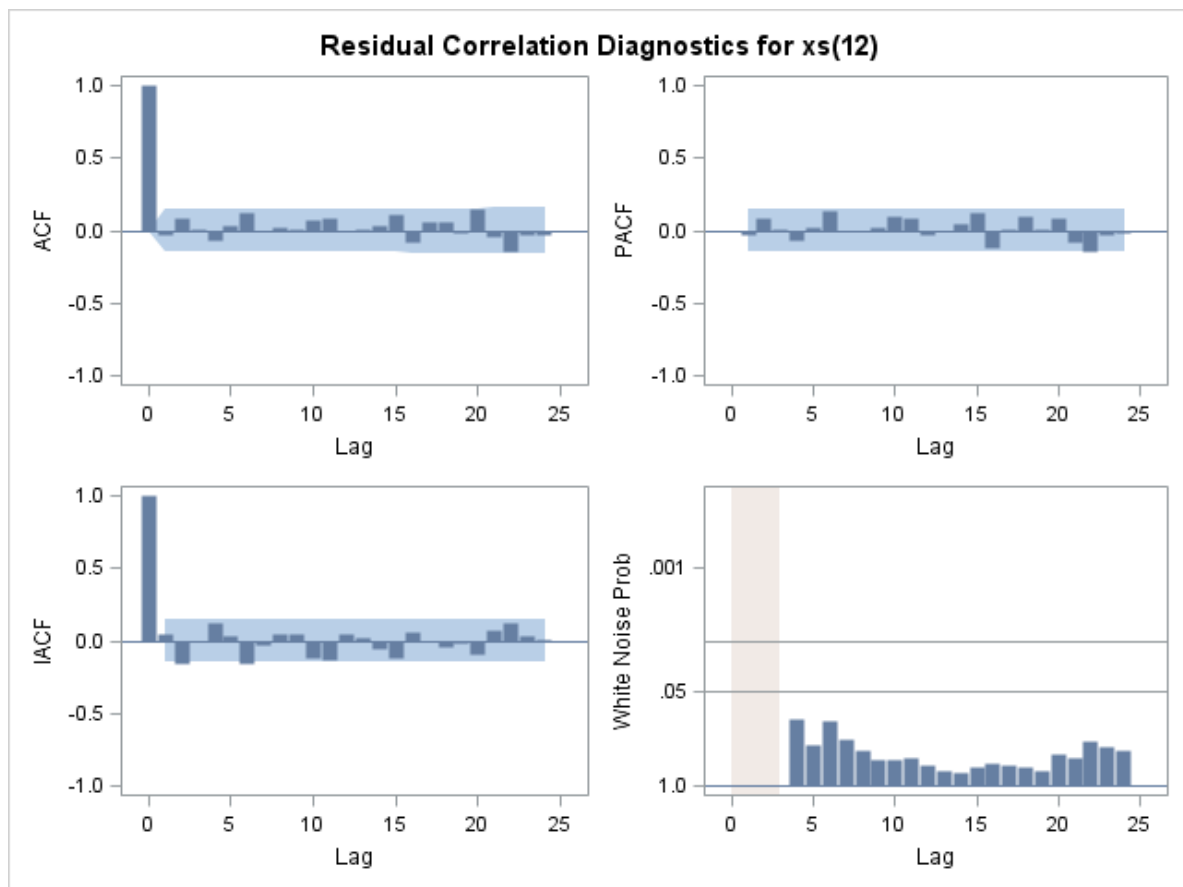
Maximum Likelihood Estimation					
Parameter	Estimate	Standard Error	t Value	Approx Pr > t	Lag
MU	865.33419	101.57973	8.52	<.0001	0
MA1,1	0.74008	0.06188	11.96	<.0001	12
AR1,1	0.61382	0.05405	11.36	<.0001	1
AR1,2	0.24829	0.05132	4.84	<.0001	19

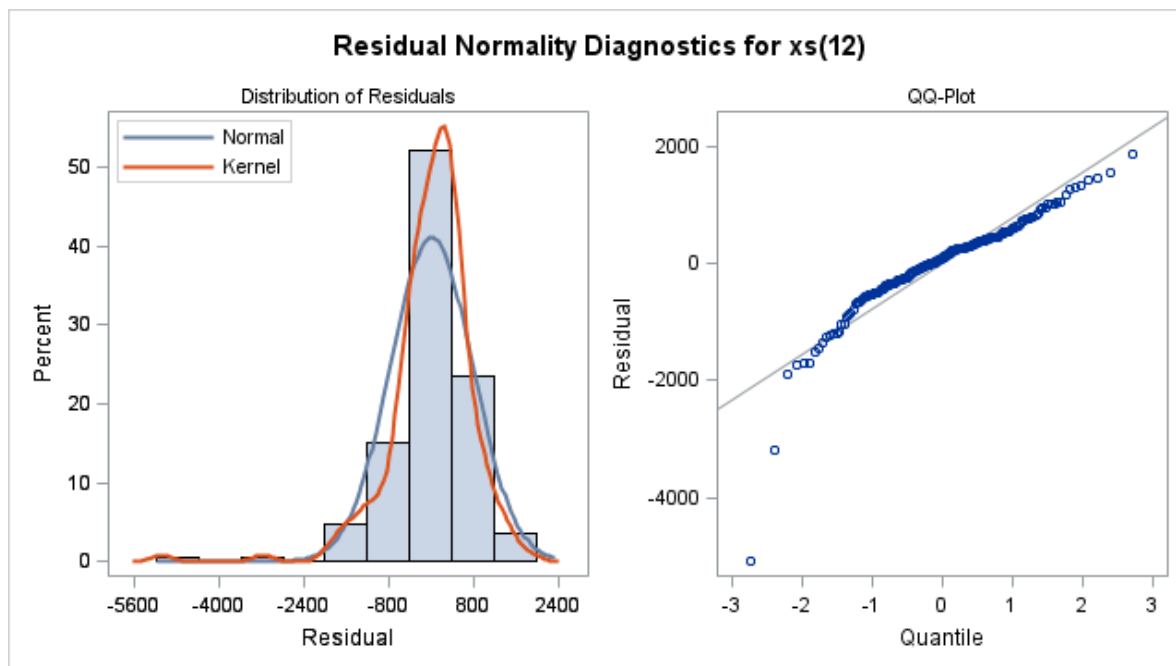
Constant Estimate	119.3197
Variance Estimate	613722.9
Std Error Estimate	783.4047

AIC	3119.496
SBC	3132.526
Number of Residuals	192

Correlations of Parameter Estimates				
Parameter	MU	MA1,1	AR1,1	AR1,2
MU	1.000	-0.028	0.030	0.063
MA1,1	-0.028	1.000	0.158	0.082
AR1,1	0.030	0.158	1.000	-0.450
AR1,2	0.063	0.082	-0.450	1.000

Autocorrelation Check of Residuals									
To Lag	Chi-Square	DF	Pr > ChiSq	Autocorrelations					
6	5.63	3	0.1311	-0.033	0.080	0.005	-0.068	0.028	0.124
12	8.28	9	0.5065	-0.011	0.025	0.010	0.072	0.083	-0.005
18	13.83	15	0.5385	0.009	0.032	0.108	-0.081	0.057	0.061
24	23.50	21	0.3182	-0.014	0.143	-0.046	-0.140	-0.025	-0.035
30	32.24	27	0.2232	-0.095	0.129	-0.103	-0.000	-0.024	0.043
36	35.24	33	0.3628	-0.038	0.028	-0.045	0.045	0.057	0.056





Model for variable xs	
Estimated Mean	865.3342
Period(s) of Differencing	12

Autoregressive Factors	
Factor 1:	$1 - 0.61382 B^{**}(1) - 0.24829 B^{**}(19)$

Moving Average Factors	
Factor 1:	$1 - 0.74008 B^{**}(12)$

Forecasts for variable xs						
Obs	Forecast	Std Error	95% Confidence Limits		Actual	Residual
13	21910.6597	1390.7508	19184.8383	24636.4811	23717.1623	1806.5026
14	23665.0273	1030.8906	21644.5188	25685.5358	24709.1958	1044.1685
15	25136.1817	1030.6272	23116.1894	27156.1739	25089.3167	-46.8650
16	23503.5576	1030.0682	21484.6609	25522.4543	24201.9195	698.3619
17	23934.0584	1028.8795	21917.4916	25950.6252	24462.2101	528.1517
18	23142.1986	1026.3406	21130.6081	25153.7891	24089.0625	946.8639
19	24580.8478	1020.8668	22579.9857	26581.7099	25089.9850	509.1372
20	24145.2783	1008.8235	22168.0205	26122.5361	25640.2772	1494.9989
21	25309.6987	1007.4407	23335.1513	27284.2461	18766.8844	-6542.8143
22	20867.8885	1003.6828	18900.7065	22835.0706	18429.6343	-2438.2543
23	20131.6579	994.6045	18182.2689	22081.0469	20458.9045	327.2467
24	23067.2923	973.0134	21160.2210	24974.3636	23597.0259	529.7336
25	22602.3648	918.1531	20802.8177	24401.9118	23290.2404	687.8757
26	24488.6182	879.7406	22764.3583	26212.8781	24007.4652	-481.1530
27	24796.2313	879.2951	23072.8446	26519.6180	24653.7083	-142.5230
28	24515.3574	879.2395	22792.0796	26238.6352	24118.9699	-396.3875
29	25194.1947	879.1517	23471.0890	26917.3004	24454.8176	-739.3771
30	24461.4147	877.8573	22740.8461	26181.9834	24041.9276	-419.4871
31	25580.8571	871.0692	23873.5929	27288.1213	24988.7713	-592.0858
32	25591.7440	859.6385	23906.8836	27276.6044	25303.8806	-287.8634

33	22413.7590	859.4033	20729.3595	24098.1584	23827.8173	1414.0584
34	23413.5281	858.7876	21730.3353	25096.7209	25013.4565	1599.9284
35	25132.0354	857.1178	23452.1154	26811.9553	24839.9964	-292.0389
36	26764.7891	852.3334	25094.2463	28435.3318	25428.0930	-1336.6960
37	24842.6643	837.6694	23200.8623	26484.4662	25000.6431	157.9788
38	26071.2082	824.7204	24454.7859	27687.6305	24467.3410	-1603.8673
39	25912.6822	824.6582	24296.3818	27528.9825	25234.2886	-678.3936
40	23660.3922	824.6435	22044.1206	25276.6637	23922.4728	262.0806
41	23483.7918	824.6327	21867.5415	25100.0421	20127.7353	-3356.0565
42	20905.1675	824.3042	19289.5610	22520.7740	21300.9727	395.8052
43	23495.0640	821.8655	21884.2373	25105.8907	23903.6285	408.5645
44	24888.6180	818.1988	23284.9778	26492.2582	24611.5527	-277.0653
45	22558.5764	818.1108	20955.1088	24162.0441	24170.1550	1611.5785
46	24370.4114	817.8899	22767.3766	25973.4462	25370.4418	1000.0303
47	25330.4409	817.2848	23728.5922	26932.2897	24252.5617	-1077.8792
48	26054.5961	815.4625	24456.3190	27652.8732	26333.2542	278.6582
49	25573.2035	809.4504	23986.7099	27159.6971	24179.0685	-1394.1350
50	25112.3310	803.7242	23537.0606	26687.6015	25027.0228	-85.3083
51	26072.2829	803.7064	24497.0472	27647.5185	25497.9275	-574.3553
52	25248.2734	803.7005	23673.0494	26823.4975	24894.6517	-353.6217
53	24691.0379	803.6977	23115.8193	26266.2565	25204.0212	512.9833
54	25378.6682	803.5687	23803.7025	26953.6340	24522.1842	-856.4840
55	26169.2273	802.4536	24596.4471	27742.0075	25706.8272	-462.4000
56	26474.4093	800.8884	24904.6969	28044.1217	24724.4102	-1749.9991
57	23397.2170	800.8479	21827.5839	24966.8500	24866.3018	1469.0848
58	25399.5379	800.7485	23830.0996	26968.9762	25695.7059	296.1681
59	25286.7946	800.4760	23717.8904	26855.6989	25576.2474	289.4527
60	26017.2296	799.6382	24449.9675	27584.4917	26332.5951	315.3655
61	24585.2600	796.7744	23023.6109	26146.9090	25249.9177	664.6578
62	25592.6064	793.9542	24036.4847	27148.7281	23836.8849	-1755.7215
63	25133.6606	793.9473	23577.5525	26689.7686	26200.5810	1066.9204
64	25777.8397	793.9445	24221.7371	27333.9422	25276.2807	-501.5590
65	25277.8375	793.9435	23721.7369	26833.9382	25536.6691	258.8316
66	25298.8888	793.8834	23742.9059	26854.8718	24999.9030	-298.9859
67	26675.1892	793.3245	25120.3018	28230.0766	25504.2134	-1170.9758
68	25744.3750	792.5689	24190.9685	27297.7815	25722.6411	-21.7339
69	24705.1480	792.5486	23151.7812	26258.5148	25243.1575	538.0095
70	25901.3460	792.4994	24348.0758	27454.6163	25730.2544	-171.0917
71	25758.1176	792.3643	24205.1120	27311.1231	25770.4183	12.3008
72	27610.5539	791.9450	26058.3703	29162.7376	26558.0467	-1052.5072
73	25829.6408	790.4852	24280.3183	27378.9632	25245.6337	-584.0071
74	25673.8667	789.0238	24127.4086	27220.3249	24989.1097	-684.7570
75	26291.8316	789.0206	24745.3797	27838.2835	26174.9427	-116.8889
76	25917.3930	789.0192	24370.9438	27463.8421	25249.3748	-668.0182
77	25538.2783	789.0187	23991.8300	27084.7266	25761.6324	223.3541
78	25803.4296	788.9885	24257.0405	27349.8187	26244.4053	440.9757
79	27239.5088	788.6961	25693.6929	28785.3248	26886.2751	-353.2337
80	26976.2944	788.3089	25431.2374	28521.3515	27165.5455	189.2511

81	25569.1296	788.2983	24024.0933	27114.1659	26829.3655	1260.2359
82	27123.0019	788.2727	25578.0157	28667.9880	27064.7600	-58.2419
83	26796.9408	788.2026	25252.0921	28341.7894	27057.6384	260.6976
84	28314.2066	787.9836	26769.7871	29858.6260	28045.9383	-268.2683
85	26818.3796	787.2139	25275.4687	28361.2906	27405.5292	587.1495
86	26881.9883	786.4368	25340.6005	28423.3762	25680.6833	-1201.3050
87	27050.2105	786.4352	25508.8258	28591.5952	27998.9462	948.7358
88	27065.9129	786.4345	25524.5296	28607.2962	27084.7892	18.8763
89	26851.9159	786.4343	25310.5330	28393.2987	27628.7388	776.8230
90	27234.4084	786.4185	25693.0566	28775.7602	26804.1418	-430.2666
91	27664.1549	786.2622	26123.1094	29205.2004	28003.1216	338.9667
92	27827.8175	786.0575	26287.1731	29368.4619	27564.7678	-263.0497
93	26558.6925	786.0519	25018.0591	28099.3258	26962.6870	403.9945
94	27300.2186	786.0382	25759.6120	28840.8252	27935.7069	635.4883
95	27514.0760	786.0009	25973.5426	29054.6094	28238.4611	724.3852
96	29139.2185	785.8840	27598.9141	30679.5228	29426.8959	287.6774
97	28249.3419	785.4710	26709.8470	29788.8368	28331.8134	82.4714
98	27592.6861	785.0521	26054.0122	29131.3599	27029.8809	-562.8052
99	28606.9033	785.0513	27068.2310	30145.5755	29003.7326	396.8293
100	28200.0058	785.0509	26661.3343	29738.6772	28269.4015	69.3957
101	28234.5402	785.0508	26695.8689	29773.2114	28857.3050	622.7648
102	28311.8039	785.0423	26773.1492	29850.4585	27526.3620	-785.4419
103	28684.9921	784.9578	27146.5030	30223.4812	28307.0788	-377.9133
104	28599.2229	784.8479	27060.9493	30137.4965	28939.2130	339.9901
105	27800.2793	784.8448	26262.0117	29338.5469	27527.3187	-272.9606
106	28387.0047	784.8375	26848.7515	29925.2579	29411.3815	1024.3768
107	29187.5108	784.8173	27649.2971	30725.7246	28600.2744	-587.2365
108	30019.9527	784.7542	28481.8627	31558.0427	29495.4810	-524.4718
109	28571.3498	784.5305	27033.6983	30109.0014	27699.9321	-871.4177
110	27453.9011	784.3031	25916.6954	28991.1069	28074.2936	620.3925
111	29570.9106	784.3026	28033.7058	31108.1155	29073.2720	-497.6387
112	28414.2524	784.3024	26877.0479	29951.4568	28531.5826	117.3302
113	28894.3555	784.3023	27357.1511	30431.5598	28754.1095	-140.2460
114	28454.4989	784.2978	26917.3035	29991.6943	28153.4989	-301.0000
115	29432.6565	784.2518	27895.5511	30969.7618	29358.5304	-74.1260
116	29684.0196	784.1922	28147.0310	31221.0082	28228.8635	-1455.1561
117	27747.1668	784.1906	26210.1815	29284.1521	28288.3370	541.1702
118	29492.6637	784.1866	27955.6862	31029.6412	29135.3082	-357.3555
119	29277.9622	784.1757	27741.0062	30814.9182	28771.8288	-506.1333
120	30412.6310	784.1413	28875.7422	31949.5198	30279.4112	-133.2198
121	29123.5091	784.0195	27586.8590	30660.1592	29580.1071	456.5980
122	28965.1936	783.8956	27428.7866	30501.6007	27274.7280	-1690.4656
123	29411.3096	783.8953	27874.9030	30947.7162	30238.7790	827.4694
124	29420.2873	783.8952	27883.8810	30956.6937	29290.2554	-130.0320
125	29809.4460	783.8952	28273.0397	31345.8523	29705.4342	-104.0118
126	29169.3886	783.8927	27632.9872	30705.7901	28972.2384	-197.1502
127	30052.8868	783.8676	28516.5345	31589.2391	30043.6213	-9.2654
128	29686.3554	783.8352	28150.0667	31222.6441	29923.5284	237.1730

129	29307.8588	783.8343	27771.5719	30844.1457	29089.1168	-218.7420
130	30027.4544	783.8321	28491.1718	31563.7371	30473.0871	445.6327
131	30151.2915	783.8261	28615.0205	31687.5624	30912.0681	760.7766
132	31785.1059	783.8074	30248.8717	33321.3402	32707.2433	922.1373
133	31007.6655	783.7409	29471.5615	32543.7695	31436.8734	429.2078
134	30044.3698	783.6732	28508.3986	31580.3410	30055.7128	11.3430
135	31276.8795	783.6731	29740.9085	32812.8504	32285.6154	1008.7359
136	30950.8721	783.6730	29414.9012	32486.8429	31713.9270	763.0549
137	31320.5091	783.6730	29784.5383	32856.4799	31507.9483	187.4392
138	30385.9304	783.6716	28849.9622	31921.8985	30733.7934	347.8630
139	31445.2789	783.6579	29909.3376	32981.2202	31982.2773	536.9984
140	31523.8556	783.6402	29987.9490	33059.7621	31843.9448	320.0893
141	30350.0744	783.6397	28814.1688	31885.9800	31667.3948	1317.3204
142	32134.6260	783.6385	30598.7227	33670.5293	32577.0129	442.3869
143	31948.3763	783.6353	30412.4794	33484.2732	32311.4692	363.0929
144	33239.6489	783.6250	31703.7721	34775.5257	33565.9490	326.3001
145	31968.9315	783.5887	30433.1259	33504.7371	31732.0566	-236.8749
146	30517.6922	783.5516	28981.9592	32053.4251	32394.8470	1877.1549
147	33515.3676	783.5516	31979.6347	35051.1004	33810.7315	295.3640
148	32403.5876	783.5515	30867.8549	33939.3204	32564.6225	161.0349
149	32342.6997	783.5515	30806.9670	33878.4325	33207.5481	864.8484
150	32170.2433	783.5508	30634.5120	33705.9746	32315.8092	145.5659
151	33277.9540	783.5433	31742.2373	34813.6706	33210.4006	-67.5534
152	32941.2794	783.5336	31405.5818	34476.9770	32949.5835	8.3041
153	32181.3488	783.5333	30645.6517	33717.0459	32706.3778	525.0290
154	33514.9038	783.5327	31979.2080	35050.5996	33902.6846	387.7808
155	33577.6442	783.5309	32041.9519	35113.3365	33656.6098	78.9656
156	34717.0529	783.5253	33181.3716	36252.7343	34941.5878	224.5349
157	33308.3022	783.5054	31772.6598	34843.9445	33918.0785	609.7763
158	32948.5626	783.4851	31412.9600	34484.1653	31752.6563	-1195.9063
159	33794.1187	783.4851	32258.5161	35329.7212	34586.3299	792.2113
160	33681.0196	783.4851	32145.4171	35216.6222	33181.7244	-499.2952
161	33588.1628	783.4851	32052.5603	35123.7653	34057.4073	469.2445
162	33196.5349	783.4847	31660.9332	34732.1366	33459.5982	263.0633
163	34295.0185	783.4806	32759.4248	35830.6121	34000.2997	-294.7188
164	33620.8360	783.4753	32085.2528	35156.4193	33764.6258	143.7898
165	33518.3580	783.4751	31982.7750	35053.9410	33282.8494	-235.5086
166	34467.5830	783.4748	32932.0007	36003.1653	34681.4850	213.9020
167	34406.7603	783.4738	32871.1799	35942.3407	34652.4521	245.6917
168	35928.0317	783.4707	34392.4573	37463.6061	36174.5409	246.5092
169	34735.8006	783.4598	33200.2475	36271.3536	34954.7528	218.9523
170	33698.1331	783.4487	32162.6019	35233.6644	33820.1583	122.0251
171	35663.0432	783.4487	34127.5119	37198.5744	36109.2128	446.1697
172	34863.2371	783.4487	33327.7059	36398.7683	34854.9768	-8.2603
173	35185.7345	783.4487	33650.2033	36721.2657	35169.3827	-16.3518
174	34400.7835	783.4485	32865.2527	35936.3143	33991.4631	-409.3204
175	35005.6964	783.4462	33470.1700	36541.2228	34827.5090	-178.1874
176	34828.0559	783.4433	33292.5352	36363.5766	35113.2566	285.2007

177	34244.7971	783.4432	32709.2765	35780.3176	34287.2102	42.4131
178	35451.5932	783.4430	33916.0731	36987.1134	35707.5374	255.9441
179	35373.0065	783.4425	33837.4873	36908.5256	34916.7704	-456.2361
180	36484.7048	783.4408	34949.1890	38020.2207	36999.8525	515.1477
181	35702.6322	783.4349	34167.1280	37238.1363	36153.3692	450.7371
182	34781.0516	783.4288	33245.5593	36316.5438	33856.5340	-924.5176
183	36123.0562	783.4288	34587.5640	37658.5484	37163.8857	1040.8295
184	35770.9243	783.4288	34235.4321	37306.4165	35672.6025	-98.3217
185	35996.0303	783.4288	34460.5382	37531.5225	36371.6355	375.6052
186	35398.9100	783.4287	33863.4180	36934.4019	35372.8474	-26.0625
187	36232.7422	783.4274	34697.2527	37768.2317	36074.7844	-157.9578
188	36044.5006	783.4258	34509.0142	37579.9871	35711.8474	-332.6532
189	35255.9146	783.4258	33720.4282	36791.4009	35335.2188	79.3043
190	36658.8500	783.4257	35123.3639	38194.3362	36938.4408	279.5908
191	36544.7114	783.4254	35009.2259	38080.1970	36479.1494	-65.5620
192	37973.0631	783.4245	36437.5793	39508.5468	38082.0233	108.9602
193	36735.4418	783.4212	35199.9644	38270.9191	36790.7112	55.2694
194	35256.6332	783.4179	33721.1624	36792.1041	34865.2346	-391.3986
195	37466.9699	783.4179	35931.4991	39002.4407	37708.3639	241.3940
196	36448.2731	783.4179	34912.8023	37983.7440	36142.2122	-306.0610
197	36756.0067	783.4179	35220.5359	38291.4775	36861.4456	105.4389
198	35877.7386	783.4178	34342.2679	37413.2093	35895.8841	18.1455
199	36836.9686	783.4171	35301.4993	38372.4380	36306.2117	-530.7569
200	36517.0028	783.4163	34981.5352	38052.4705	36956.3875	439.3847
201	36168.8106	783.4162	34633.3430	37704.2782	34917.4737	-1251.3369
202	36856.2967	783.4162	35320.8293	38391.7642	36894.0517	37.7549
203	36822.7539	783.4160	35287.2867	38358.2211	36790.6408	-32.1131
204	38610.4212	783.4155	37074.9550	40145.8874	39035.2891	424.8679
205	37797.2465	783.4047	36261.8015	39332.6914	.	.
206	36201.7385	919.2164	34400.1074	38003.3695	.	.
207	38618.0347	965.4444	36725.7983	40510.2710	.	.
208	37306.6269	982.2979	35381.3583	39231.8955	.	.
209	37923.1011	988.5734	35985.5328	39860.6694	.	.
210	37041.3675	990.9275	35099.1852	38983.5498	.	.
211	37790.1358	991.8131	35846.2179	39734.0537	.	.
212	37819.6453	992.1465	35875.0739	39764.2168	.	.
213	36743.1929	992.2721	34798.3752	38688.0105	.	.
214	38241.2830	992.3194	36296.3726	40186.1934	.	.
215	37877.2839	992.3373	35932.3386	39822.2292	.	.
216	39628.8001	992.3440	37683.8416	41573.7586	.	.

