Forecast of historical and future values of x
intervention model p=(20) q=(1,3)(12) d=(1,12)

Obs	x	qx	lnx	date	t
1	442905725	145.070	19.9089	9862	1
2	466003371	146.926	19.9597	9893	2
3	518137719	150.873	20.0658	9921	3
4	470704644	147.295	19.9697	9952	4
5	485453672	148.435	20.0006	9982	5
6	455360000	146.079	19.9366	10013	6
7	512236941	150.442	20.0543	10043	7
8	506682210	150.032	20.0434	10074	8
9	544530278	152.759	20.1154	10105	9
10	568926707	154.442	20.1593	10135	10
11	560096653	153.839	20.1436	10166	11
12	632553772	158.589	20.2653	10196	12
13	562503787	154.004	20.1479	10227	13
14	610544355	157.192	20.2299	10258	14
15	629473813	158.396	20.2604	10287	15
16	585732909	155.570	20.1884	10318	16
17	598399725	156.404	20.2098	10348	17
18	580282931	155.207	20.1790	10379	18
19	629507349	158.398	20.2604	10409	19
20	657423817	160.126	20.3038	10440	20
21	352195950	136.992	19.6797	10471	21
22	339651419	135.756	19.6434	10501	22
23	418566775	143.035	19.8523	10532	23
24	556819633	153.613	20.1378	10562	24
25	542435299	152.611	20.1116	10593	25
26	576358386	154.943	20.1722	10624	26
27	607805335	157.015	20.2254	10652	27
28	581724710	155.303	20.1815	10683	28
29	598038105	156.380	20.2092	10713	29
30	578014283	155.055	20.1751	10744	30
31	624438691	158.078	20.2524	10774	31
32	640286373	159.072	20.2774	10805	32
33	567764879	154.363	20.1572	10836	33
34	625673005	158.156	20.2543	10866	34
35	617025422	157.607	20.2404	10897	35
36	646587914	159.462	20.2872	10927	36
37	625032153	158.116	20.2533	10958	37
38	598650774	156.420	20.2102	10989	38
39	636769319	158.853	20.2719	11017	39
40	572284703	154.669	20.1651	11048	40
41	405125729	141.872	19.8197	11078	41
42	453731440	145.949	19.9330	11109	42
43	571383456	154.608	20.1636	11139	43
44	605728525	156.881	20.2219	11170	44
45	584196391	155.468	20.1857	11201	45
46	643659315	159.281	20.2827	11231	46
47	588186751	155.732	20.1926	11262	47
48	693440279	162.275	20.3572	11292	48

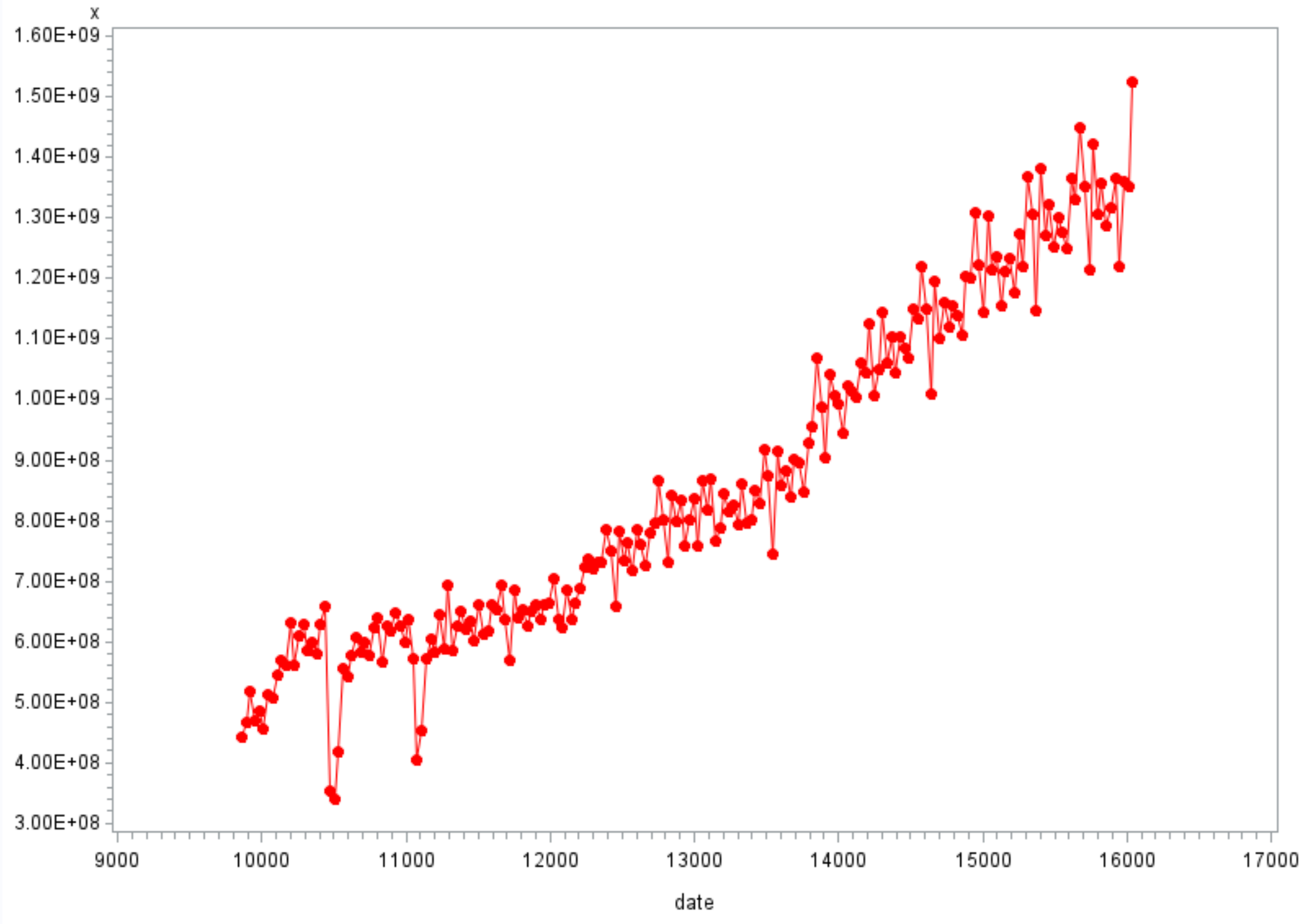
49	584627354	155.496	20.1865	11323	49
50	626351869	158.199	20.2554	11354	50
51	650144308	159.681	20.2927	11382	51
52	619743684	157.780	20.2448	11413	52
53	635242686	158.758	20.2695	11443	53
54	601337518	156.596	20.2147	11474	54
55	660840967	160.333	20.3090	11504	55
56	611296460	157.240	20.2311	11535	56
57	618332965	157.691	20.2425	11566	57
58	660269303	160.299	20.3082	11596	58
59	654144429	159.926	20.2988	11627	59
60	693405565	162.273	20.3571	11657	60
61	637558345	158.902	20.2732	11688	61
62	568197083	154.392	20.1580	11719	62
63	686470446	161.866	20.3471	11748	63
64	638890367	158.985	20.2752	11779	64
65	652121471	159.802	20.2957	11809	65
66	624995149	158.114	20.2533	11840	66
67	650464902	159.700	20.2932	11870	67
68	661654263	160.383	20.3103	11901	68
69	637217002	158.881	20.2726	11932	69
70	662045989	160.407	20.3108	11962	70
71	664114461	160.532	20.3140	11993	71
72	705329845	162.966	20.3742	12023	72
73	637342019	158.889	20.2728	12054	73
74	624455603	158.079	20.2524	12085	74
75	685127626	161.787	20.3451	12113	75
76	637530926	158.901	20.2731	12144	76
77	663661706	160.504	20.3133	12174	77
78	688768807	162.001	20.3504	12205	78
79	722871791	163.970	20.3987	12235	79
80	737966863	164.820	20.4194	12266	80
81	719814854	163.797	20.3945	12297	81
82	732501235	164.514	20.4120	12327	82
83	732115794	164.492	20.4114	12358	83
84	786574655	167.469	20.4832	12388	84
85	751063029	165.546	20.4370	12419	85
86	659497496	160.252	20.3070	12450	86
87	783940991	167.329	20.4798	12478	87
88	733585805	164.575	20.4135	12509	88
89	763347210	166.219	20.4532	12539	89
90	718462019	163.720	20.3926	12570	90
91	784174820	167.341	20.4801	12600	91
92	759816425	166.026	20.4486	12631	92
93	726986490	164.203	20.4044	12662	93
94	780403719	167.140	20.4753	12692	94
95	797410688	168.043	20.4969	12723	95
96	865942201	171.543	20.5793	12753	96
97	802691648	168.321	20.5035	12784	97
98	730614461	164.408	20.4094	12815	98
99	841216506	170.305	20.5504	12843	99

100	799159062	168.135	20.4991	12874	100
101	832744051	169.874	20.5402	12904	101
102	757700604	165.911	20.4458	12935	102
103	801290710	168.247	20.5017	12965	103
104	837478050	170.115	20.5459	12996	104
105	757753276	165.914	20.4459	13027	105
106	865029361	171.497	20.5783	13057	106
107	817975694	169.116	20.5223	13088	107
108	869983397	171.742	20.5840	13118	108
109	767286241	166.433	20.4584	13149	109
110	788165961	167.554	20.4852	13180	110
111	845255142	170.509	20.5551	13209	111
112	814051205	168.913	20.5175	13240	112
113	826798811	169.570	20.5331	13270	113
114	792619499	167.790	20.4909	13301	114
115	861923310	171.343	20.5747	13331	115
116	796868733	168.014	20.4962	13362	116
117	800230012	168.191	20.5004	13393	117
118	848866183	170.691	20.5594	13423	118
119	827818135	169.623	20.5343	13454	119
120	916842742	174.010	20.6364	13484	120
121	874982735	171.989	20.5897	13515	121
122	743910789	165.151	20.4274	13546	122
123	914383754	173.893	20.6338	13574	123
124	857919060	171.144	20.5700	13605	124
125	882412819	172.353	20.5982	13635	125
126	839390599	170.212	20.5482	13666	126
127	902619183	173.331	20.6208	13696	127
128	895417550	172.984	20.6128	13727	128
129	846176717	170.555	20.5562	13758	129
130	928609038	174.565	20.6492	13788	130
131	955555954	175.818	20.6778	13819	131
132	1069763763	180.851	20.7907	13849	132
133	988277007	177.304	20.7115	13880	133
134	903345872	173.366	20.6216	13911	134
135	1042360960	179.682	20.7648	13939	135
136	1005773165	178.084	20.7290	13970	136
137	992750807	177.505	20.7160	14000	137
138	944566055	175.311	20.6662	14031	138
139	1022866064	178.836	20.7459	14061	139
140	1014036823	178.449	20.7372	14092	140
141	1002823893	177.953	20.7261	14123	141
142	1061261771	180.491	20.7827	14153	142
143	1044031040	179.754	20.7664	14184	143
144	1126672930	183.210	20.8425	14214	144
145	1006923414	178.135	20.7302	14245	145
146	1049426114	179.986	20.7715	14276	146
147	1143165566	183.877	20.8571	14304	147
148	1060454639	180.457	20.7820	14335	148
149	1102741251	182.229	20.8211	14365	149
150	1044311525	179.766	20.7666	14396	150

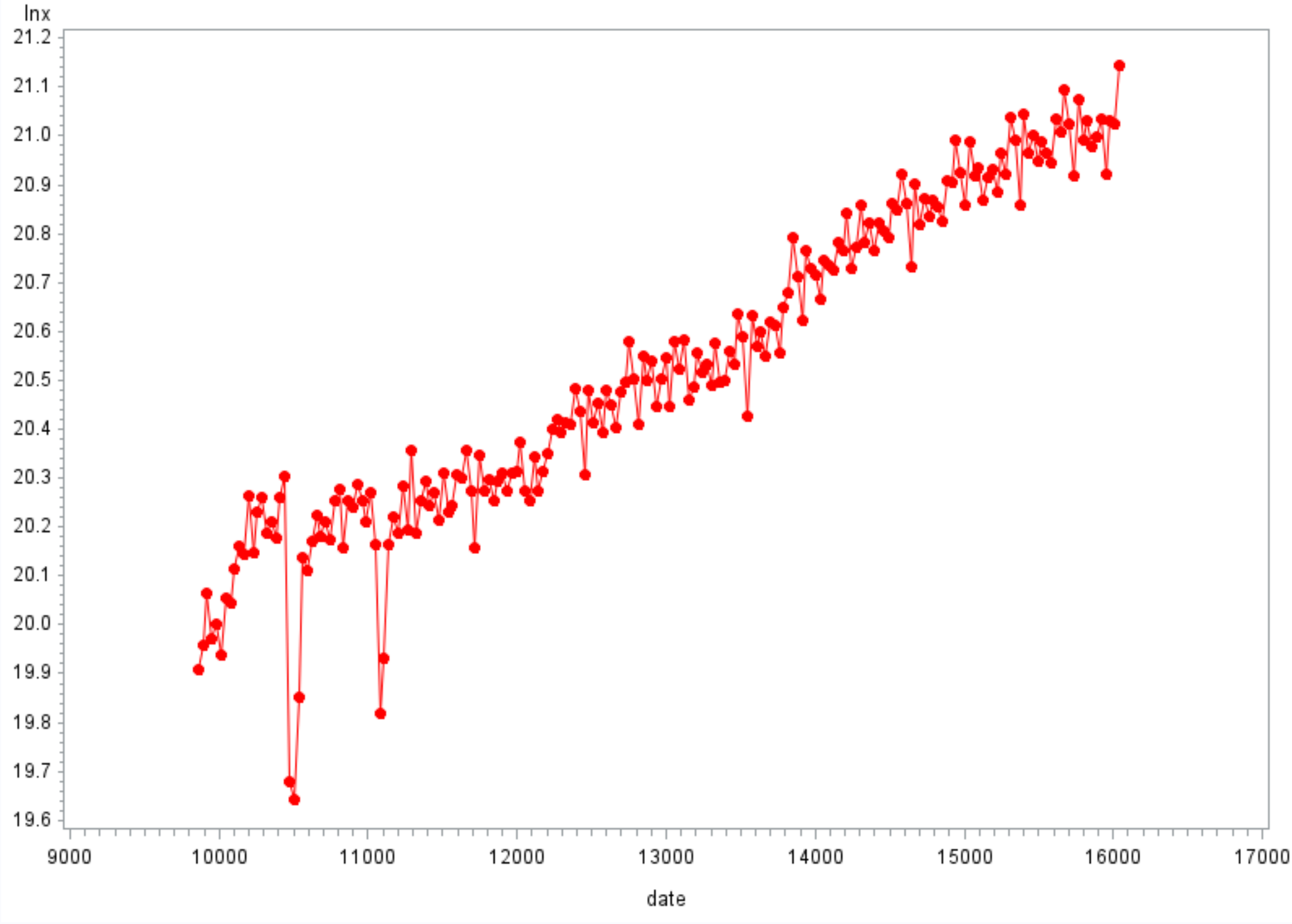
151	1102930706	182.237	20.8212	14426	151
152	1085675052	181.520	20.8055	14457	152
153	1069707150	180.849	20.7907	14488	153
154	1149392023	184.127	20.8625	14518	154
155	1132767384	183.457	20.8479	14549	155
156	1220914557	186.927	20.9229	14579	156
157	1150436049	184.169	20.8634	14610	157
158	1008231182	178.193	20.7315	14641	158
159	1196214219	185.974	20.9024	14670	159
160	1101026837	182.159	20.8195	14701	160
161	1159906990	184.546	20.8716	14731	161
162	1119544712	182.920	20.8362	14762	162
163	1156020379	184.392	20.8682	14792	163
164	1140049956	183.752	20.8543	14823	164
165	1107748066	182.436	20.8256	14854	165
166	1202805402	186.230	20.9079	14884	166
167	1200792434	186.152	20.9062	14915	167
168	1308597409	190.196	20.9922	14945	168
169	1221834746	186.962	20.9236	14976	169
170	1143803107	183.903	20.8576	15007	170
171	1303875250	190.024	20.9886	15035	171
172	1214869409	186.695	20.9179	15066	172
173	1236885478	187.535	20.9359	15096	173
174	1155419565	184.368	20.8677	15127	174
175	1212955380	186.621	20.9163	15157	175
176	1232940788	187.385	20.9327	15188	176
177	1175612785	185.168	20.8851	15219	177
178	1275028225	188.964	20.9662	15249	178
179	1219180852	186.860	20.9214	15280	179
180	1368989087	192.353	21.0373	15310	180
181	1307066108	190.140	20.9911	15341	181
182	1146264895	184.001	20.8598	15372	182
183	1381154403	192.779	21.0462	15400	183
184	1272534572	188.872	20.9643	15431	184
185	1322895872	190.713	21.0031	15461	185
186	1251238335	188.077	20.9474	15492	186
187	1301390069	189.934	20.9867	15522	187
188	1275336046	188.976	20.9665	15553	188
189	1248577689	187.977	20.9453	15584	189
190	1364448412	192.194	21.0340	15614	190
191	1330728344	190.995	21.0090	15645	191
192	1450240499	195.146	21.0950	15675	192
193	1353556428	191.809	21.0260	15706	193
194	1215584585	186.722	20.9185	15737	194
195	1421920706	194.186	21.0753	15765	195
196	1306259500	190.111	20.9904	15796	196
197	1358766172	191.993	21.0298	15826	197
198	1288514496	189.462	20.9768	15857	198
199	1318141011	190.542	20.9995	15887	199
200	1365774580	192.240	21.0350	15918	200
201	1219229971	186.862	20.9215	15949	201

202	1361171049	192.078	21.0316	15979	202
203	1353551250	191.809	21.0260	16010	203
204	1523753795	197.574	21.1444	16040	204
205	.	.	.	16071	205
206	.	.	.	16102	206
207	.	.	.	16131	207
208	.	.	.	16162	208
209	.	.	.	16192	209
210	.	.	.	16223	210
211	.	.	.	16253	211
212	.	.	.	16284	212
213	.	.	.	16315	213
214	.	.	.	16345	214
215	.	.	.	16376	215
216	.	.	.	16406	216

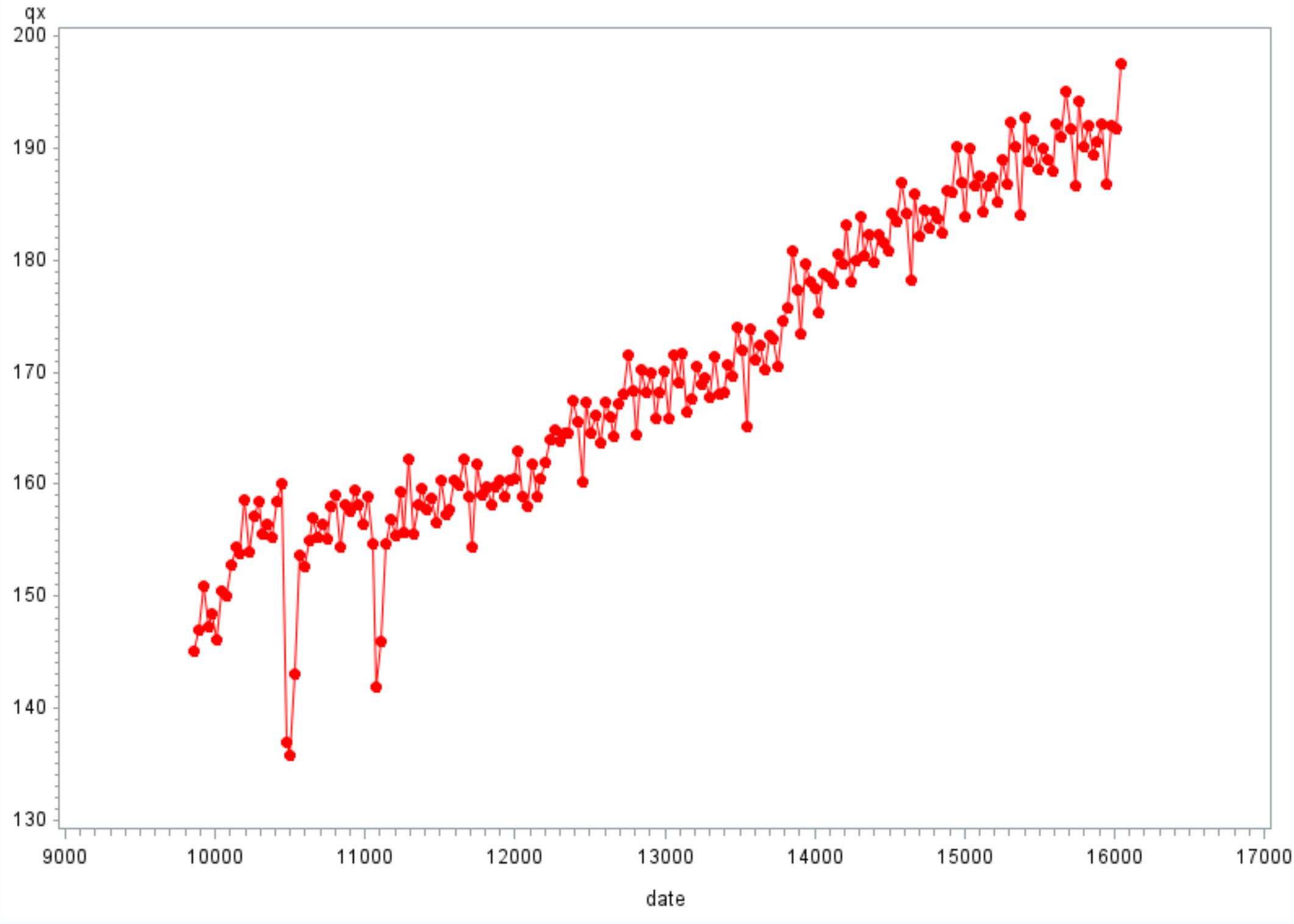
Time series plot of x



Time series plot of log of x



Time series plot of quratic of x



Time series plot of quratic of x

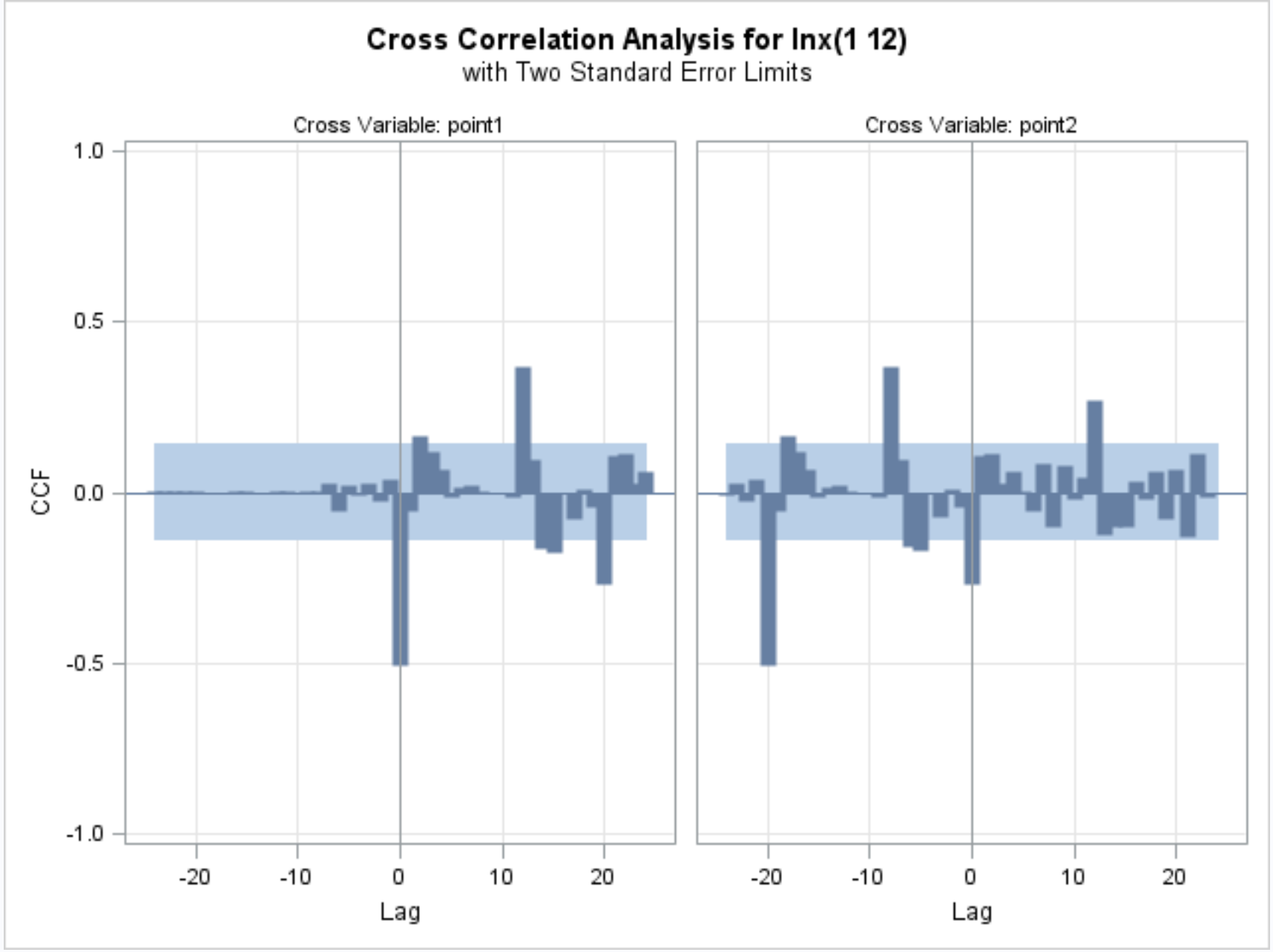
The ARIMA Procedure

Name of Variable = lnx	
Period(s) of Differencing	1,12
Mean of Working Series	-0.00099
Standard Deviation	0.099464
Number of Observations	191
Observation(s) eliminated by differencing	13

Autocorrelation Check for White Noise									
To Lag	Chi-Square	DF	Pr > ChiSq	Autocorrelations					
6	12.01	6	0.0618	-0.103	-0.118	-0.163	-0.051	0.034	0.080
12	69.85	12	<.0001	-0.136	-0.060	0.051	0.115	0.090	-0.486
18	81.62	18	<.0001	0.045	0.013	0.184	-0.080	0.008	-0.116
24	108.09	24	<.0001	0.182	0.249	-0.013	-0.153	-0.064	-0.010

Correlation of lnx and point1	
Variance of input =	0.004608
Number of Observations	191

Correlation of lnx and point2	
Variance of input =	0.004608
Number of Observations	191



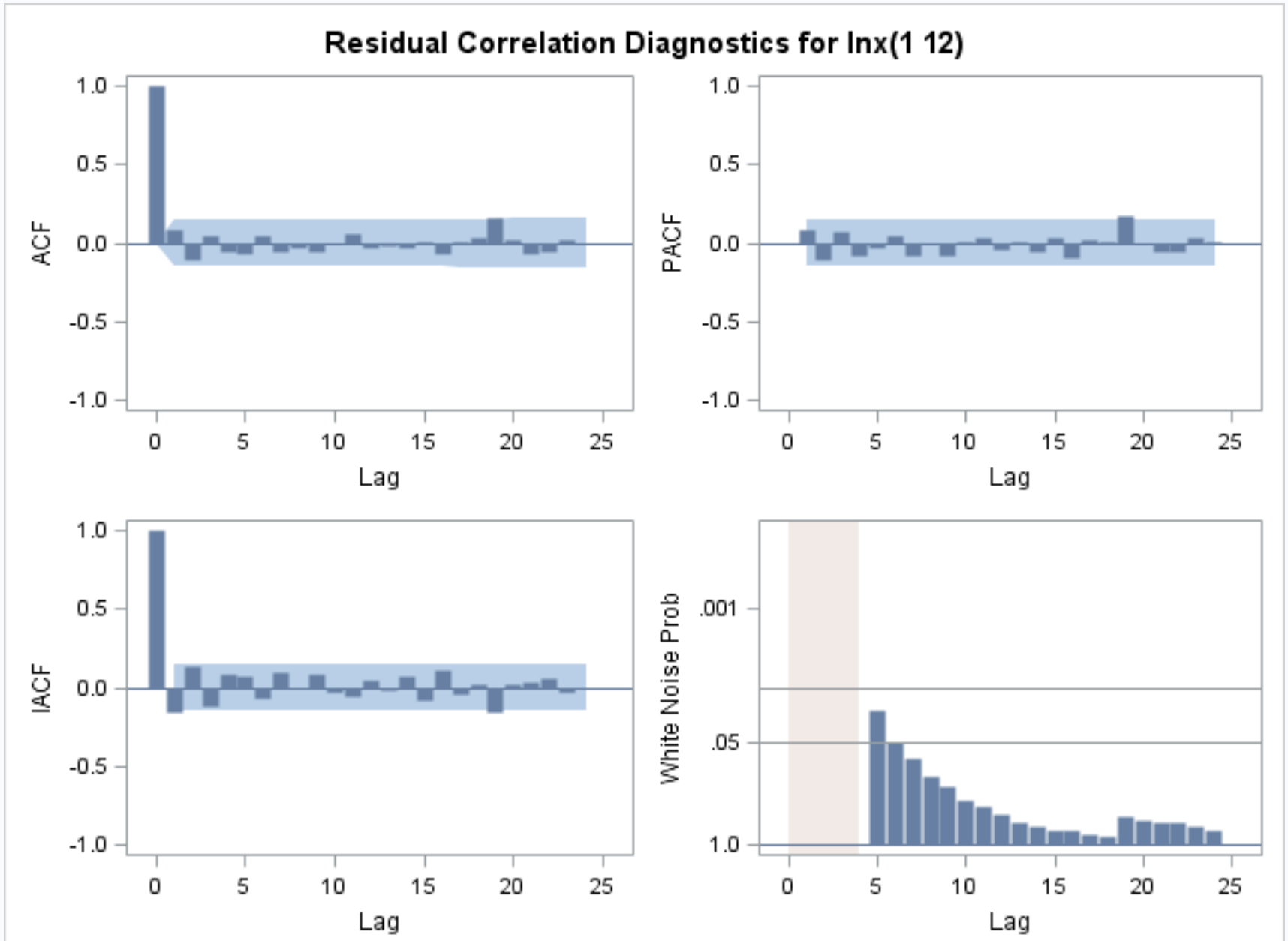
Conditional Least Squares Estimation							
Parameter	Estimate	Standard Error	t Value	Approx Pr > |t|	Lag	Variable	Shift
MU	0.0004776	0.0005277	0.91	0.3666	0	lnx	0
MA1,1	0.40063	0.06368	6.29	<.0001	1	lnx	0
MA1,2	0.32271	0.06288	5.13	<.0001	3	lnx	0
MA2,1	0.80470	0.04654	17.29	<.0001	12	lnx	0
AR1,1	0.29873	0.07182	4.16	<.0001	20	lnx	0
NUM1	-0.20388	0.03276	-6.22	<.0001	0	point1	0
NUM2	-0.04952	0.03406	-1.45	0.1476	0	point2	0

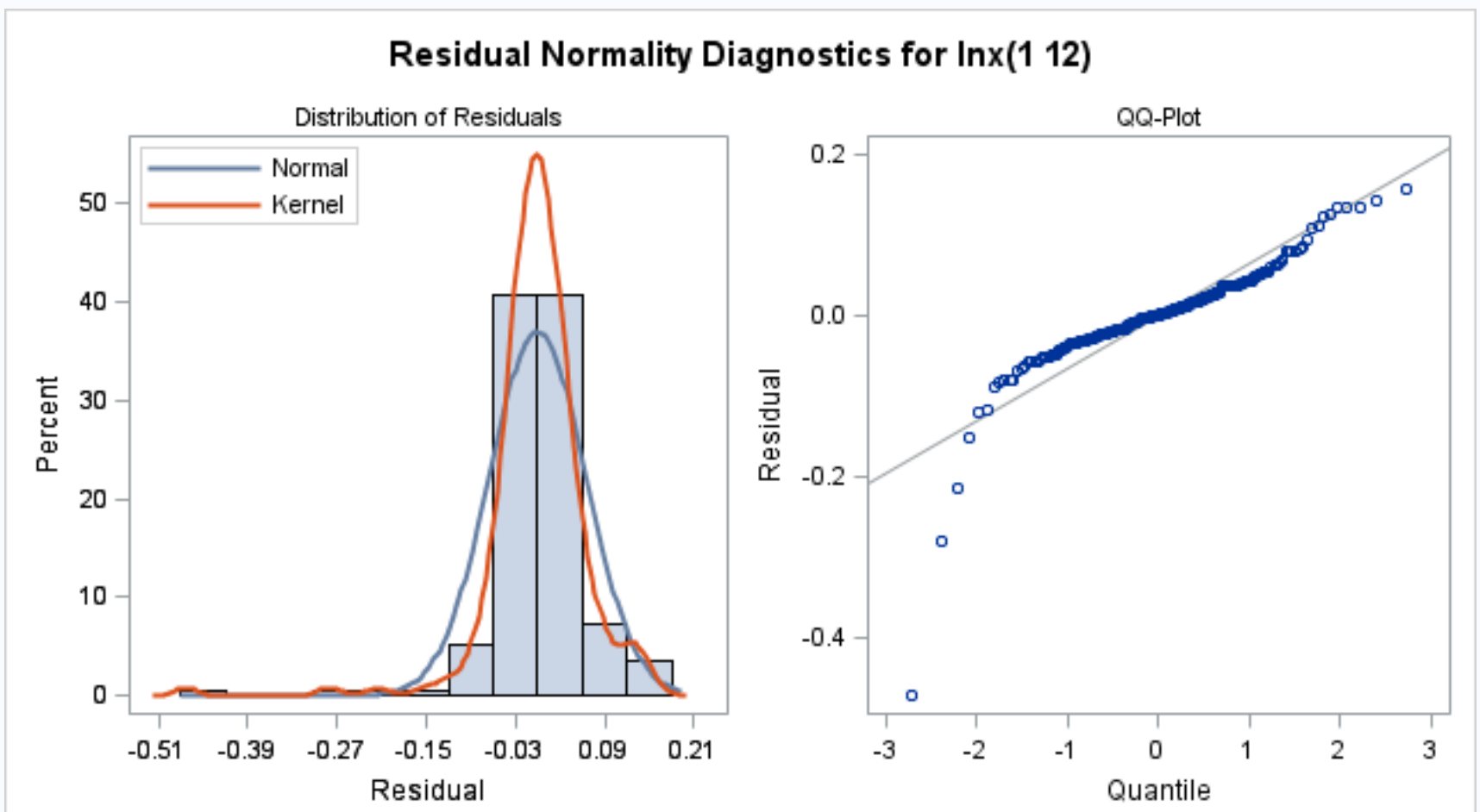
Constant Estimate	0.000335
Variance Estimate	0.004338
Std Error Estimate	0.06586
AIC	-490.22
SBC	-467.454
Number of Residuals	191

*** AIC and SBC do not include log determinant.**

Correlations of Parameter Estimates							
Variable Parameter	lnx MU	lnx MA1,1	lnx MA1,2	lnx MA2,1	lnx AR1,1	point1 NUM1	point2 NUM2
lnx MU	1.000	-0.055	0.041	0.114	-0.044	-0.320	-0.394
lnx MA1,1	-0.055	1.000	-0.278	-0.076	0.118	0.008	0.144
lnx MA1,2	0.041	-0.278	1.000	0.031	-0.064	0.003	-0.067
lnx MA2,1	0.114	-0.076	0.031	1.000	-0.097	-0.077	-0.054
lnx AR1,1	-0.044	0.118	-0.064	-0.097	1.000	-0.005	0.025
point1 NUM1	-0.320	0.008	0.003	-0.077	-0.005	1.000	0.103
point2 NUM2	-0.394	0.144	-0.067	-0.054	0.025	0.103	1.000

Autocorrelation Check of Residuals									
To Lag	Chi-Square	DF	Pr > ChiSq	Autocorrelations					
6	6.01	2	0.0496	0.089	-0.101	0.049	-0.061	-0.063	0.050
12	8.26	8	0.4087	-0.062	-0.030	-0.053	-0.011	0.052	-0.025
18	9.68	14	0.7855	-0.014	-0.031	0.006	-0.066	0.003	0.033
24	17.05	20	0.6499	0.161	0.022	-0.063	-0.058	0.025	0.001
30	20.69	26	0.7578	-0.064	0.062	-0.086	-0.022	-0.003	0.023
36	23.66	32	0.8564	-0.068	0.017	-0.022	0.029	0.066	0.047





Model for variable lnx	
Estimated Intercept	0.000478
Period(s) of Differencing	1,12

Autoregressive Factors	
Factor 1:	1 - 0.29873 B**(20)

Moving Average Factors	
Factor 1:	1 - 0.40063 B**(1) - 0.32271 B**(3)
Factor 2:	1 - 0.8047 B**(12)

Input Number 1	
Input Variable	point1
Overall Regression Factor	-0.20388

Input Number 2	
Input Variable	point2
Overall Regression Factor	-0.04952

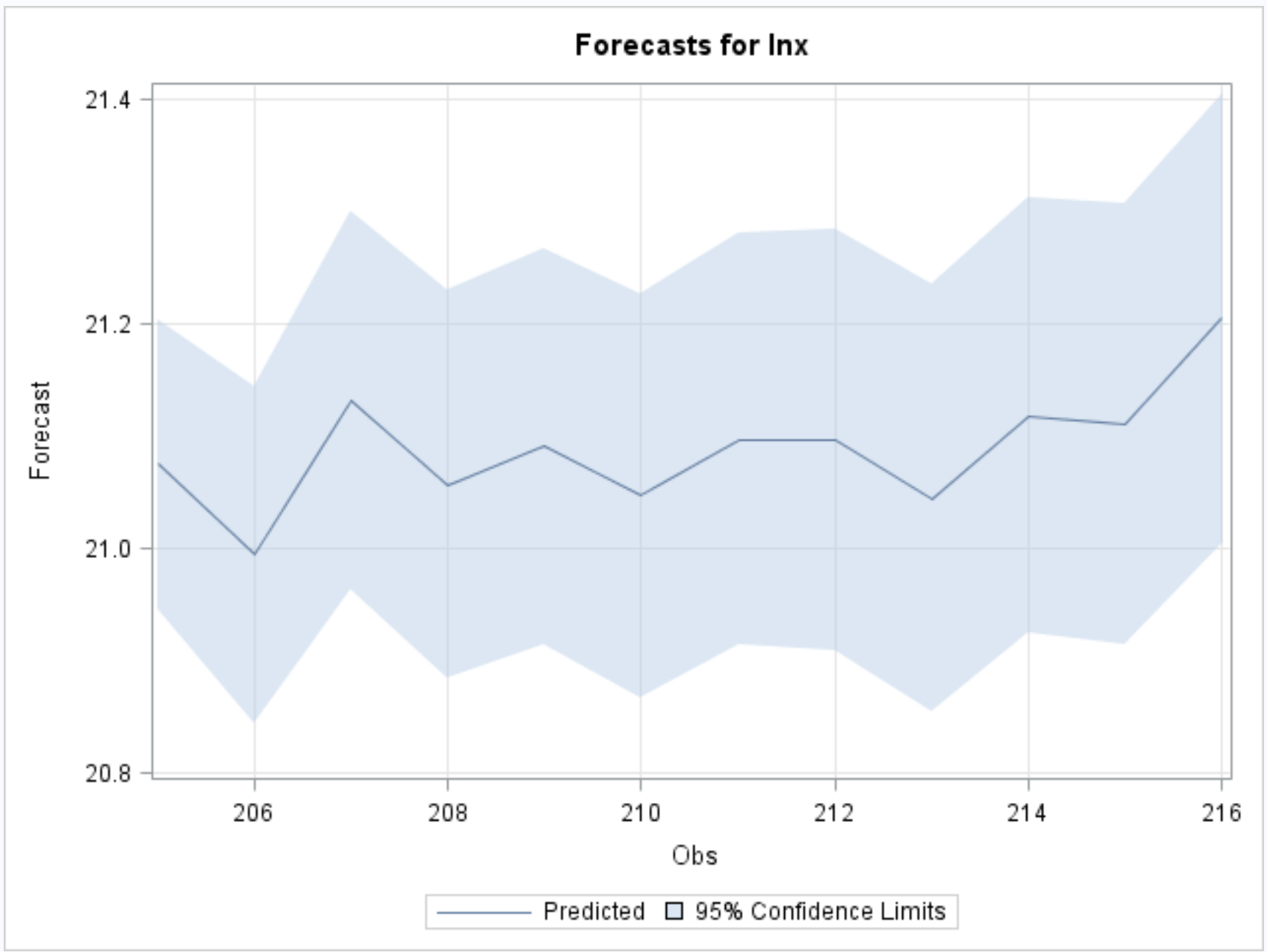
Forecasts for variable lnx						
Obs	**Forecast**	**Std Error**	**95% Confidence Limits**		**Actual**	**Residual**
14	20.1992	0.0659	20.0701	20.3283	20.2299	0.0306
15	20.3241	0.0659	20.1950	20.4532	20.2604	-0.0637
16	20.1904	0.0659	20.0613	20.3195	20.1884	-0.0020
17	20.2106	0.0659	20.0815	20.3397	20.2098	-0.0009
18	20.1672	0.0659	20.0381	20.2962	20.1790	0.0119
19	20.2931	0.0659	20.1640	20.4222	20.2604	-0.0326
20	20.2634	0.0659	20.1343	20.3925	20.3038	0.0405
21	20.1524	0.0659	20.0234	20.2815	19.6797	-0.4727
22	19.9239	0.0659	19.7949	20.0530	19.6434	-0.2805
23	19.7276	0.0659	19.5985	19.8567	19.8523	0.1248
24	20.0771	0.0659	19.9480	20.2061	20.1378	0.0607
25	20.0871	0.0659	19.9580	20.2162	20.1116	0.0245
26	20.1193	0.0659	19.9902	20.2484	20.1722	0.0530
27	20.2236	0.0659	20.0945	20.3527	20.2254	0.0018
28	20.1263	0.0659	19.9972	20.2554	20.1815	0.0552
29	20.1722	0.0659	20.0431	20.3012	20.2092	0.0370
30	20.1371	0.0659	20.0080	20.2662	20.1751	0.0380
31	20.2535	0.0659	20.1245	20.3826	20.2524	-0.0012
32	20.2415	0.0659	20.1124	20.3705	20.2774	0.0360
33	20.0236	0.0659	19.8945	20.1527	20.1572	0.1336
34	20.1423	0.0659	20.0132	20.2714	20.2543	0.1121
35	20.2042	0.0659	20.0751	20.3333	20.2404	0.0362
36	20.3443	0.0659	20.2152	20.4734	20.2872	-0.0571
37	20.1723	0.0659	20.0432	20.3014	20.2533	0.0810
38	20.2778	0.0659	20.1487	20.4069	20.2102	-0.0676
39	20.3297	0.0659	20.2006	20.4588	20.2719	-0.0578
40	20.2041	0.0659	20.0750	20.3332	20.1651	-0.0390
41	20.0358	0.0659	19.9067	20.1648	19.8197	-0.2160
42	19.8491	0.0659	19.7200	19.9782	19.9330	0.0839
43	20.0842	0.0659	19.9551	20.2133	20.1636	0.0794
44	20.2561	0.0659	20.1270	20.3852	20.2219	-0.0341
45	20.0299	0.0659	19.9008	20.1590	20.1857	0.1559
46	20.1414	0.0659	20.0123	20.2704	20.2827	0.1413
47	20.2466	0.0659	20.1175	20.3757	20.1926	-0.0540
48	20.3118	0.0659	20.1827	20.4408	20.3572	0.0454
49	20.2072	0.0659	20.0781	20.3362	20.1865	-0.0207

50	20.2583	0.0659	20.1292	20.3874	20.2554	-0.0029
51	20.3127	0.0659	20.1836	20.4417	20.2927	-0.0199
52	20.2292	0.0659	20.1001	20.3583	20.2448	0.0156
53	20.1887	0.0659	20.0596	20.3178	20.2695	0.0808
54	20.2449	0.0659	20.1158	20.3740	20.2147	-0.0302
55	20.3391	0.0659	20.2100	20.4682	20.3090	-0.0301
56	20.2794	0.0659	20.1503	20.4085	20.2311	-0.0483
57	20.1074	0.0659	19.9783	20.2365	20.2425	0.1352
58	20.2215	0.0659	20.0924	20.3506	20.3082	0.0867
59	20.2820	0.0659	20.1529	20.4111	20.2988	0.0169
60	20.3811	0.0659	20.2521	20.5102	20.3571	-0.0240
61	20.1397	0.0659	20.0106	20.2688	20.2732	0.1334
62	20.3092	0.0659	20.1801	20.4383	20.1580	-0.1512
63	20.3366	0.0659	20.2076	20.4657	20.3471	0.0104
64	20.2379	0.0659	20.1088	20.3670	20.2752	0.0374
65	20.2984	0.0659	20.1694	20.4275	20.2957	-0.0027
66	20.2841	0.0659	20.1550	20.4131	20.2533	-0.0308
67	20.3440	0.0659	20.2149	20.4731	20.2932	-0.0508
68	20.3222	0.0659	20.1931	20.4513	20.3103	-0.0119
69	20.1637	0.0659	20.0346	20.2928	20.2726	0.1089
70	20.3108	0.0659	20.1818	20.4399	20.3108	0.0000
71	20.3002	0.0659	20.1711	20.4293	20.3140	0.0137
72	20.4094	0.0659	20.2803	20.5385	20.3742	-0.0352
73	20.3226	0.0659	20.1935	20.4517	20.2728	-0.0498
74	20.2923	0.0659	20.1633	20.4214	20.2524	-0.0399
75	20.3651	0.0659	20.2360	20.4942	20.3451	-0.0200
76	20.2649	0.0659	20.1359	20.3940	20.2731	0.0082
77	20.2927	0.0659	20.1637	20.4218	20.3133	0.0205
78	20.2866	0.0659	20.1575	20.4157	20.3504	0.0638
79	20.4273	0.0659	20.2982	20.5564	20.3987	-0.0285
80	20.3817	0.0659	20.2526	20.5108	20.4194	0.0377
81	20.2728	0.0659	20.1438	20.4019	20.3945	0.1217
82	20.3604	0.0659	20.2314	20.4895	20.4120	0.0515
83	20.4138	0.0659	20.2847	20.5429	20.4114	-0.0024
84	20.4876	0.0659	20.3585	20.6167	20.4832	-0.0044
85	20.3948	0.0659	20.2657	20.5238	20.4370	0.0422
86	20.4241	0.0659	20.2950	20.5532	20.3070	-0.1171
87	20.4262	0.0659	20.2971	20.5553	20.4798	0.0536
88	20.3755	0.0659	20.2464	20.5046	20.4135	0.0380
89	20.4376	0.0659	20.3085	20.5667	20.4532	0.0156
90	20.4090	0.0659	20.2800	20.5381	20.3926	-0.0164
91	20.4850	0.0659	20.3559	20.6141	20.4801	-0.0048
92	20.4644	0.0659	20.3353	20.5935	20.4486	-0.0158
93	20.3613	0.0659	20.2322	20.4904	20.4044	0.0431
94	20.4252	0.0659	20.2961	20.5542	20.4753	0.0502
95	20.4597	0.0659	20.3306	20.5887	20.4969	0.0372
96	20.5744	0.0659	20.4453	20.7035	20.5793	0.0049
97	20.4992	0.0659	20.3701	20.6283	20.5035	0.0043
98	20.4911	0.0659	20.3620	20.6202	20.4094	-0.0817
99	20.5342	0.0659	20.4051	20.6633	20.5504	0.0162
100	20.4752	0.0659	20.3461	20.6043	20.4991	0.0239

101	20.5290	0.0659	20.4000	20.6581	20.5402	0.0112
102	20.4962	0.0659	20.3672	20.6253	20.4458	-0.0504
103	20.5535	0.0659	20.4244	20.6826	20.5017	-0.0518
104	20.5063	0.0659	20.3772	20.6354	20.5459	0.0396
105	20.4749	0.0659	20.3458	20.6040	20.4459	-0.0290
106	20.4850	0.0659	20.3559	20.6141	20.5783	0.0933
107	20.5561	0.0659	20.4270	20.6852	20.5223	-0.0337
108	20.6489	0.0659	20.5199	20.7780	20.5840	-0.0650
109	20.5154	0.0659	20.3863	20.6445	20.4584	-0.0570
110	20.4460	0.0659	20.3169	20.5750	20.4852	0.0393
111	20.6054	0.0659	20.4763	20.7345	20.5551	-0.0502
112	20.5143	0.0659	20.3852	20.6433	20.5175	0.0033
113	20.5168	0.0659	20.3877	20.6459	20.5331	0.0163
114	20.5130	0.0659	20.3839	20.6421	20.4909	-0.0222
115	20.5932	0.0659	20.4641	20.7222	20.5747	-0.0185
116	20.5789	0.0659	20.4498	20.7080	20.4962	-0.0827
117	20.4509	0.0659	20.3218	20.5800	20.5004	0.0495
118	20.5322	0.0659	20.4031	20.6612	20.5594	0.0273
119	20.5775	0.0659	20.4485	20.7066	20.5343	-0.0432
120	20.6360	0.0659	20.5069	20.7651	20.6364	0.0004
121	20.5518	0.0659	20.4227	20.6809	20.5897	0.0379
122	20.5468	0.0659	20.4177	20.6759	20.4274	-0.1194
123	20.5722	0.0659	20.4431	20.7012	20.6338	0.0616
124	20.5485	0.0659	20.4195	20.6776	20.5700	0.0215
125	20.5973	0.0659	20.4682	20.7263	20.5982	0.0009
126	20.5645	0.0659	20.4354	20.6935	20.5482	-0.0163
127	20.6174	0.0659	20.4883	20.7464	20.6208	0.0035
128	20.5996	0.0659	20.4705	20.7287	20.6128	0.0132
129	20.5302	0.0659	20.4011	20.6593	20.5562	0.0260
130	20.6294	0.0659	20.5003	20.7585	20.6492	0.0198
131	20.6131	0.0659	20.4840	20.7422	20.6778	0.0647
132	20.7486	0.0659	20.6195	20.8777	20.7907	0.0421
133	20.6901	0.0659	20.5610	20.8192	20.7115	0.0214
134	20.6327	0.0659	20.5037	20.7618	20.6216	-0.0111
135	20.7395	0.0659	20.6104	20.8686	20.7648	0.0252
136	20.6601	0.0659	20.5310	20.7892	20.7290	0.0689
137	20.7398	0.0659	20.6107	20.8689	20.7160	-0.0238
138	20.6752	0.0659	20.5461	20.8043	20.6662	-0.0090
139	20.7273	0.0659	20.5982	20.8564	20.7459	0.0186
140	20.7413	0.0659	20.6122	20.8704	20.7372	-0.0041
141	20.6882	0.0659	20.5591	20.8172	20.7261	0.0379
142	20.7350	0.0659	20.6060	20.8641	20.7827	0.0477
143	20.7924	0.0659	20.6633	20.9215	20.7664	-0.0260
144	20.8637	0.0659	20.7346	20.9928	20.8425	-0.0212
145	20.7620	0.0659	20.6329	20.8911	20.7302	-0.0319
146	20.6921	0.0659	20.5630	20.8212	20.7715	0.0794
147	20.8737	0.0659	20.7446	21.0028	20.8571	-0.0167
148	20.8179	0.0659	20.6888	20.9470	20.7820	-0.0360
149	20.7784	0.0659	20.6493	20.9075	20.8211	0.0427
150	20.7762	0.0659	20.6471	20.9052	20.7666	-0.0095
151	20.8781	0.0659	20.7490	21.0072	20.8212	-0.0569

152	20.8282	0.0659	20.6991	20.9573	20.8055	-0.0227
153	20.7630	0.0659	20.6339	20.8921	20.7907	0.0277
154	20.8552	0.0659	20.7261	20.9843	20.8625	0.0073
155	20.8673	0.0659	20.7382	20.9964	20.8479	-0.0193
156	20.9501	0.0659	20.8211	21.0792	20.9229	-0.0273
157	20.8383	0.0659	20.7092	20.9674	20.8634	0.0251
158	20.8204	0.0659	20.6913	20.9495	20.7315	-0.0890
159	20.8974	0.0659	20.7683	21.0265	20.9024	0.0050
160	20.8326	0.0659	20.7035	20.9617	20.8195	-0.0131
161	20.8812	0.0659	20.7521	21.0103	20.8716	-0.0096
162	20.8260	0.0659	20.6969	20.9550	20.8362	0.0102
163	20.9112	0.0659	20.7821	21.0403	20.8682	-0.0430
164	20.8732	0.0659	20.7441	21.0023	20.8543	-0.0188
165	20.8021	0.0659	20.6731	20.9312	20.8256	0.0234
166	20.9297	0.0659	20.8006	21.0588	20.9079	-0.0218
167	20.9033	0.0659	20.7742	21.0324	20.9062	0.0029
168	20.9839	0.0659	20.8548	21.1130	20.9922	0.0083
169	20.9253	0.0659	20.7962	21.0543	20.9236	-0.0016
170	20.8650	0.0659	20.7359	20.9941	20.8576	-0.0074
171	20.9819	0.0659	20.8528	21.1110	20.9886	0.0067
172	20.9204	0.0659	20.7914	21.0495	20.9179	-0.0025
173	20.9530	0.0659	20.8239	21.0821	20.9359	-0.0171
174	20.9000	0.0659	20.7709	21.0291	20.8677	-0.0323
175	20.9489	0.0659	20.8198	21.0780	20.9163	-0.0326
176	20.9198	0.0659	20.7907	21.0489	20.9327	0.0129
177	20.9030	0.0659	20.7739	21.0321	20.8851	-0.0180
178	20.9476	0.0659	20.8185	21.0767	20.9662	0.0186
179	20.9645	0.0659	20.8354	21.0936	20.9214	-0.0431
180	21.0288	0.0659	20.8997	21.1579	21.0373	0.0085
181	20.9619	0.0659	20.8328	21.0910	20.9911	0.0292
182	20.9394	0.0659	20.8103	21.0685	20.8598	-0.0797
183	21.0079	0.0659	20.8788	21.1370	21.0462	0.0383
184	20.9554	0.0659	20.8263	21.0845	20.9643	0.0089
185	21.0116	0.0659	20.8825	21.1407	21.0031	-0.0085
186	20.9517	0.0659	20.8226	21.0808	20.9474	-0.0043
187	21.0142	0.0659	20.8851	21.1432	20.9867	-0.0275
188	20.9951	0.0659	20.8660	21.1242	20.9665	-0.0286
189	20.9396	0.0659	20.8105	21.0686	20.9453	0.0057
190	21.0238	0.0659	20.8947	21.1529	21.0340	0.0102
191	21.0268	0.0659	20.8977	21.1559	21.0090	-0.0178
192	21.1087	0.0659	20.9797	21.2378	21.0950	-0.0137
193	21.0252	0.0659	20.8961	21.1542	21.0260	0.0008
194	20.9530	0.0659	20.8239	21.0821	20.9185	-0.0345
195	21.0742	0.0659	20.9451	21.2033	21.0753	0.0011
196	21.0148	0.0659	20.8857	21.1439	20.9904	-0.0244
197	21.0339	0.0659	20.9048	21.1630	21.0298	-0.0040
198	20.9860	0.0659	20.8570	21.1151	20.9768	-0.0093
199	21.0381	0.0659	20.9090	21.1672	20.9995	-0.0386
200	21.0173	0.0659	20.8882	21.1464	21.0350	0.0177
201	21.0018	0.0659	20.8727	21.1308	20.9215	-0.0803
202	21.0222	0.0659	20.8931	21.1513	21.0316	0.0094

203	21.0242	0.0659	20.8951	21.1532	21.0260	0.0018
204	21.1410	0.0659	21.0119	21.2700	21.1444	0.0035
205	21.0751	0.0659	20.9460	21.2042	.	.
206	20.9945	0.0768	20.8440	21.1450	.	.
207	21.1321	0.0863	20.9629	21.3014	.	.
208	21.0569	0.0882	20.8839	21.2298	.	.
209	21.0910	0.0901	20.9144	21.2676	.	.
210	21.0469	0.0919	20.8668	21.2271	.	.
211	21.0977	0.0937	20.9140	21.2813	.	.
212	21.0968	0.0955	20.9097	21.2839	.	.
213	21.0448	0.0972	20.8543	21.2352	.	.
214	21.1188	0.0989	20.9250	21.3126	.	.
215	21.1108	0.1005	20.9138	21.3079	.	.
216	21.2057	0.1022	21.0054	21.4060	.	.



Time series plot of quratic of x

Obs	FORECAST	L95	U95	x	date	t
1	.	.	.	442905725	9862	1
2	.	.	.	466003371	9893	2
3	.	.	.	518137719	9921	3
4	.	.	.	470704644	9952	4
5	.	.	.	485453672	9982	5
6	.	.	.	455360000	10013	6
7	.	.	.	512236941	10043	7
8	.	.	.	506682210	10074	8
9	.	.	.	544530278	10105	9
10	.	.	.	568926707	10135	10
11	.	.	.	560096653	10166	11
12	.	.	.	632553772	10196	12
13	.	.	.	562503787	10227	13
14	592121242.82	520415384.94	673707150.76	610544355	10258	14
15	670887565.30	589643109.05	763326355.17	629473813	10287	15
16	586914335.53	515839033.91	667782805.51	585732909	10318	16
17	598911659.06	526383482.05	681433190.03	598399725	10348	17
18	573435768.85	503992721.09	652447083.53	580282931	10379	18
19	650399759.21	571636375.42	740015620.02	629507349	10409	19
20	631355030.84	554897962.86	718346798.23	657423817	10440	20
21	565056321.69	496628024.64	642913067.42	352195950	10471	21
22	449629613.43	395179485.94	511582196.10	339651419	10501	22
23	369472921.18	324729765.79	420381048.69	418566775	10532	23
24	524028012.58	460568242.05	596231639.30	556819633	10562	24
25	529300652.51	465202365.50	602230774.22	542435299	10593	25
26	546624634.22	480428413.75	621941754.87	576358386	10624	26
27	606730057.27	533255072.57	690328852.61	607805335	10652	27
28	550469647.96	483807796.49	626316556.96	581724710	10683	28
29	576310670.34	506519472.13	655718105.67	598038105	10713	29
30	556472178.51	489083420.84	633146151.07	578014283	10744	30
31	625177794.40	549468789.50	711318426.24	624438691	10774	31
32	617665282.40	542866042.39	702770796.64	640286373	10805	32
33	496768100.46	436609504.16	565215697.98	567764879	10836	33
34	559347737.67	491610749.90	636417921.49	625673005	10866	34
35	595083146.09	523018601.85	677077162.28	617025422	10897	35
36	684587509.98	601683991.00	778913957.89	646587914	10927	36
37	576377682.04	506578368.72	655794350.63	625032153	10958	37
38	640505659.86	562940451.09	728758254.13	598650774	10989	38
39	674666192.45	592964144.61	767625623.54	636769319	11017	39
40	595028572.93	522970637.49	677015069.71	572284703	11048	40
41	502826120.70	441933898.40	572108427.48	405125729	11078	41
42	417209208.32	366685190.55	474694719.06	453731440	11109	42
43	527776709.50	463862971.93	600496853.48	571383456	11139	43
44	626767645.18	550866109.41	713127335.90	605728525	11170	44
45	499877891.83	439342699.92	568753974.48	584196391	11201	45
46	558833582.99	491158859.33	635832923.60	643659315	11231	46
47	620835910.54	545652707.59	706378292.36	588186751	11262	47
48	662652218.06	582405062.01	753956293.90	693440279	11292	48

49	596835155.47	524558442.97	679070573.71	584627354	11323	49
50	628175256.57	552103259.12	714728896.17	626351869	11354	50
51	663244315.99	582925456.91	754629974.52	650144308	11382	51
52	610155161.34	536265396.67	694225887.43	619743684	11413	52
53	585914828.62	514960567.25	666645580.72	635242686	11443	53
54	619776468.30	544721563.76	705172874.01	601337518	11474	54
55	681023465.68	598551552.31	774858838.83	660840967	11504	55
56	641539918.15	563849460.74	729935018.53	611296460	11535	56
57	540156141.64	474743255.36	614581995.77	618332965	11566	57
58	605463572.20	532141958.79	688887863.86	660269303	11596	58
59	643202595.91	565310788.30	731826789.71	654144429	11627	59
60	710257275.35	624245148.85	808120652.80	693405565	11657	60
61	557923197.41	490358721.41	634797099.80	637558345	11688	61
62	660958450.22	580916409.39	752029148.87	568197083	11719	62
63	679342061.47	597073766.08	772945760.97	686470446	11748	63
64	615463211.27	540930641.98	700265311.35	638890367	11779	64
65	653882168.28	574697064.90	743977855.66	652121471	11809	65
66	644550759.85	566495689.64	733360711.51	624995149	11840	66
67	684355803.18	601480343.88	778650325.18	650464902	11870	67
68	669584937.58	588498229.48	761844243.82	661654263	11901	68
69	571460542.67	502256694.72	650199699.20	637217002	11932	69
70	662044903.77	581871293.46	753265300.31	662045989	11962	70
71	655051358.89	575724666.58	745308144.15	664114461	11993	71
72	730607055.92	642130571.84	831274344.46	705329845	12023	72
73	669884633.57	588761632.30	762185233.67	637342019	12054	73
74	649907421.48	571203659.77	739455445.14	624455603	12085	74
75	698966451.87	614321643.62	795274114.00	685127626	12113	75
76	632339111.54	555762871.43	719466471.29	637530926	12144	76
77	650165324.38	571430330.64	739748883.39	663661706	12174	77
78	646208846.60	567952982.15	735247259.10	688768807	12205	78
79	743799033.48	653725001.46	846283989.41	722871791	12235	79
80	710645469.36	624586332.57	808562334.43	737966863	12266	80
81	637353399.32	560169929.17	725171656.80	719814854	12297	81
82	695714343.62	611463365.54	791573911.37	732501235	12327	82
83	733848794.95	644979736.40	834962749.15	732115794	12358	83
84	790023452.62	694351645.36	898877477.79	786574655	12388	84
85	720002699.81	632810402.81	819208858.51	751063029	12419	85
86	741440821.35	651652368.72	843600849.09	659497496	12450	86
87	742991673.98	653015413.16	845365387.22	783940991	12478	87
88	706243441.16	620717389.81	803553769.19	733585805	12509	88
89	751516874.13	660508211.93	855065239.02	763347210	12539	89
90	730355016.22	641909054.13	830987577.27	718462019	12570	90
91	787970953.17	692547703.52	896542173.04	784174820	12600	91
92	771919497.28	678440078.26	878279054.22	759816425	12631	92
93	696285394.33	611965262.04	792223644.76	726986490	12662	93
94	742217364.31	652334872.36	844484388.66	780403719	12692	94
95	768270659.99	675233115.02	874127458.91	797410688	12723	95
96	861708866.07	757355958.22	980440124.35	865942201	12753	96
97	799240584.38	702452582.85	909364599.57	802691648	12784	97
98	792811686.40	696802224.15	902049890.65	730614461	12815	98
99	827712609.25	727476646.70	941759665.59	841216506	12843	99

100	780314536.29	685818478.40	887830810.52	799159062	12874	100
101	823475760.13	723752879.83	936939038.76	832744051	12904	101
102	796903572.37	700398582.90	906705580.45	757700604	12935	102
103	843887936.20	741693142.22	960163723.14	801290710	12965	103
104	804970735.99	707488813.34	915884284.78	837478050	12996	104
105	780065858.99	685599915.91	887547869.02	757753276	13027	105
106	787990715.45	692565072.58	896564658.28	865029361	13057	106
107	846035938.70	743581021.71	962607689.92	817975694	13088	107
108	928373624.81	815947617.46	1056290341.20	869983397	13118	108
109	812329670.14	713956580.87	924257175.67	767286241	13149	109
110	757825915.63	666053228.77	862243576.94	788165961	13180	110
111	888791385.47	781158785.65	1011254230.75	845255142	13209	111
112	811389626.52	713130376.49	923187607.38	814051205	13240	112
113	813430192.02	714923829.60	925509333.86	826798811	13270	113
114	810378686.89	712241861.61	922037374.61	792619499	13301	114
115	877999226.29	771673556.50	998975065.13	861923310	13331	115
116	865547476.76	760729713.32	984807641.15	796868733	13362	116
117	761597615.04	669368175.54	866534963.03	800230012	13393	117
118	826041838.07	726008205.83	939858685.83	848866183	13423	118
119	864396940.20	759718506.69	983498576.96	827818135	13454	119
120	916442130.29	805461026.42	1042714855.98	916842742	13484	120
121	842428539.45	740410478.36	958503242.21	874982735	13515	121
122	838239709.58	736728915.62	953737251.02	743910789	13546	122
123	859748546.43	755633033.21	978209700.47	914383754	13574	123
124	839689452.96	738003095.13	955386748.47	857919060	13605	124
125	881607307.73	774844699.43	1003080289.01	882412819	13635	125
126	853158325.88	749840888.10	970711441.02	839390599	13666	126
127	899509294.68	790578756.51	1023448915.82	902619183	13696	127
128	883656324.23	776645580.12	1005411630.92	895417550	13727	128
129	824433246.78	724594414.88	938028453.49	846176717	13758	129
130	910386936.18	800139116.07	1035825342.02	928609038	13788	130
131	895695302.29	787226638.43	1019109409.38	955555954	13819	131
132	1025663186.43	901455417.21	1166985024.34	1069763763	13849	132
133	967375879.35	850226700.59	1100666553.16	988277007	13880	133
134	913457042.86	802837432.96	1039318465.85	903345872	13911	134
135	1016399900.07	893313914.44	1156445388.53	1042360960	13939	135
136	938817968.61	825127151.66	1068173767.42	1005773165	13970	136
137	1016701234.82	893578757.57	1156788242.93	992750807	14000	137
138	953080643.92	837662617.58	1084401637.07	944566055	14031	138
139	1004064700.99	882472507.46	1142410573.99	1022866064	14061	139
140	1018165620.40	894865806.12	1158454400.07	1014036823	14092	140
141	965500016.82	848578004.93	1098532223.38	1002823893	14123	141
142	1011842250.67	889308196.20	1151259759.69	1061261771	14153	142
143	1071561783.03	941795695.67	1219207796.48	1044031040	14184	143
144	1150787894.97	1011427528.75	1309350142.81	1126672930	14214	144
145	1039515418.92	913630144.92	1182745897.98	1006923414	14245	145
146	969346673.63	851958831.77	1102908894.93	1049426114	14276	146
147	1162360471.12	1021598666.41	1322517255.80	1143165566	14304	147
148	1099276603.17	966154252.25	1250741325.70	1060454639	14335	148
149	1056685495.02	928720925.52	1202281767.00	1102741251	14365	149
150	1054315340.56	926637796.66	1199585038.88	1044311525	14396	150

151	1167503205.36	1026118615.75	1328368585.87	1102930706	14426	151
152	1110641087.73	976142498.19	1263671675.02	1085675052	14457	152
153	1040532416.41	914523984.06	1183903023.30	1069707150	14488	153
154	1141051290.27	1002870026.47	1298271972.09	1149392023	14518	154
155	1154888050.76	1015031155.85	1314015241.91	1132767384	14549	155
156	1254667125.48	1102726988.76	1427542457.74	1220914557	14579	156
157	1121904528.45	986041936.71	1276487058.10	1150436049	14610	157
158	1102042599.78	968585286.78	1253888437.40	1008231182	14641	158
159	1190197594.06	1046064714.92	1354189939.40	1196214219	14670	159
160	1115568282.86	980473010.21	1269277767.75	1101026837	14701	160
161	1171065253.87	1029249300.33	1332421434.13	1159906990	14731	161
162	1108151116.97	973954062.79	1260838621.61	1119544712	14762	162
163	1206766913.87	1060627490.79	1373042276.45	1156020379	14792	163
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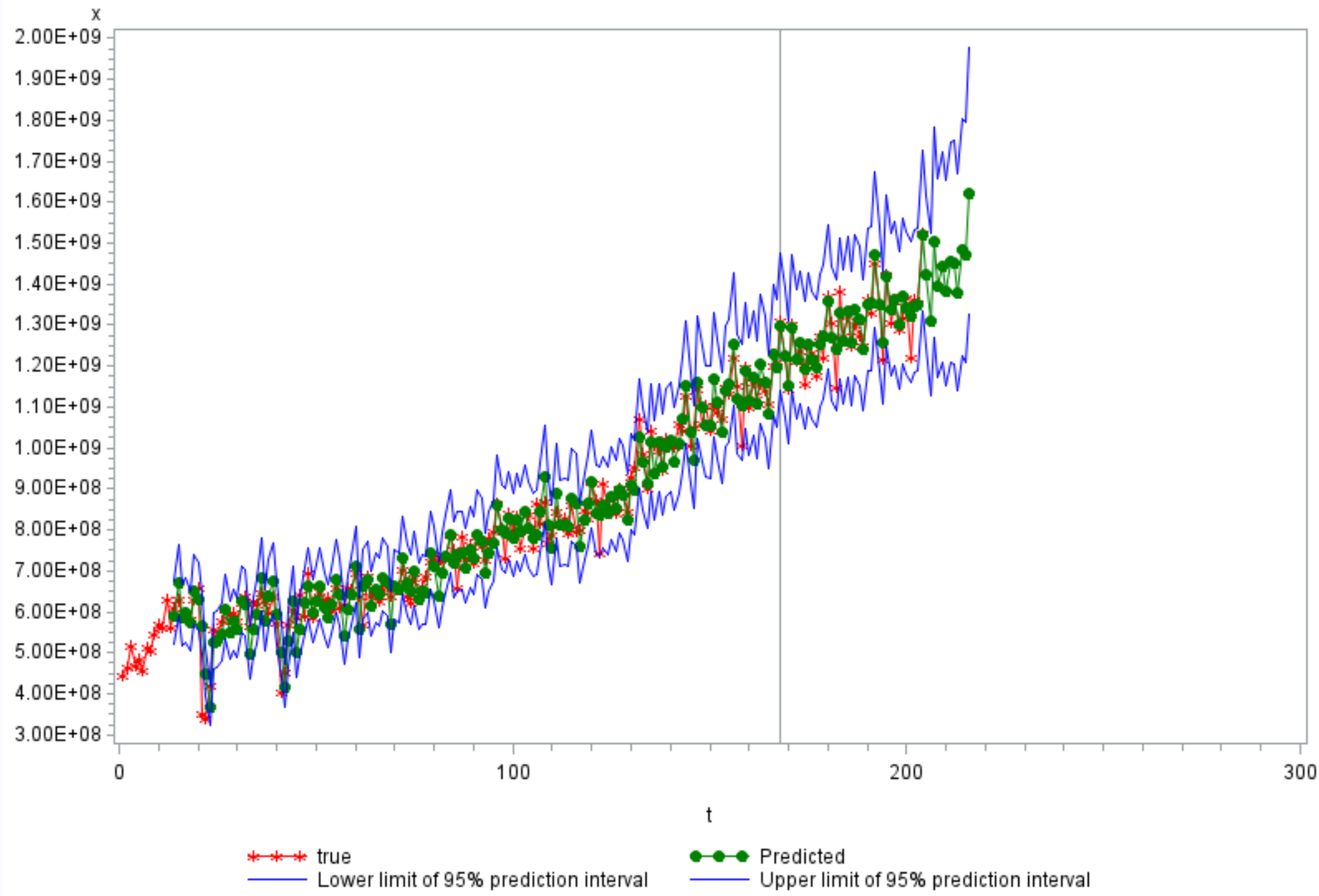
165	1082074168.95	951035032.09	1231168640.05	1107748066	14854	165
166	1229312615.72	1080442909.09	1398694456.20	1202805402	14884	166
167	1197266065.41	1052277194.68	1362232345.83	1200792434	14915	167
168	1297755263.71	1140597155.24	1476567530.20	1308597409	14945	168
169	1223845811.50	1075638134.62	1392474403.90	1221834746	14976	169
170	1152255164.29	1012717111.81	1311019581.02	1143803107	15007	170
171	1295148225.54	1138305829.29	1473601279.16	1303875250	15035	171
172	1217965647.50	1070470058.25	1385784036.72	1214869409	15066	172
173	1258259765.78	1105884560.47	1431630112.91	1236885478	15096	173
174	1193327633.29	1048815706.52	1357751253.63	1155419565	15127	174
175	1253091576.70	1101342238.88	1425749820.69	1212955380	15157	175
176	1217144456.29	1069748313.26	1384849697.00	1232940788	15188	176
177	1196935858.78	1051986976.06	1361856641.41	1175612785	15219	177
178	1251492229.40	1099936572.46	1423930106.01	1275028225	15249	178
179	1272813306.56	1118675668.07	1448188925.16	1219180852	15280	179
180	1357364091.46	1192987356.44	1544389608.87	1368989087	15310	180
181	1269474452.95	1115741149.49	1444390024.89	1307066108	15341	181
182	1241310464.82	1090987819.15	1412345438.71	1146264895	15372	182
183	1329274868.26	1168299737.00	1512430089.16	1381154403	15400	183
184	1261290686.25	1108548436.60	1435078651.23	1272534572	15431	184
185	1334225642.61	1172650972.78	1518063009.98	1322895872	15461	185
186	1256606440.06	1104431452.43	1429748982.36	1251238335	15492	186
187	1337625141.56	1175638792.54	1521930911.66	1301390069	15522	187
188	1312378977.87	1153449938.23	1493206184.74	1275336046	15553	188
189	1241464372.31	1091123088.46	1412520552.47	1248577689	15584	189
190	1350603780.56	1187045718.91	1536697823.02	1364448412	15614	190
191	1354596842.39	1190555221.11	1541241072.12	1330728344	15645	191
192	1470309096.63	1292254726.18	1672896833.60	1450240499	15675	192
193	1352424239.41	1188645720.26	1538769115.27	1353556428	15706	193
194	1258288757.60	1105910041.38	1431663099.39	1215584585	15737	194
195	1420349669.98	1248345384.01	1616053706.64	1421920706	15765	195
196	1338485518.15	1176394977.57	1522909835.95	1306259500	15796	196
197	1364273105.29	1199059688.98	1552250586.79	1358766172	15826	197
198	1300542006.24	1143046423.37	1479738246.33	1288514496	15857	198
199	1370061328.16	1204146958.30	1558836344.67	1318141011	15887	199
200	1341819701.08	1179325391.09	1526703421.99	1365774580	15918	200
201	1321129947.21	1161141165.55	1503162913.52	1219229971	15949	201

202	1348410651.05	1185118177.29	1534202511.37	1361171049	15979	202
203	1351059798.85	1187446513.40	1537216674.16	1353551250	16010	203
204	1518463863.37	1334577952.67	1727686644.12	1523753795	16040	204
205	1421707873.89	1249539109.49	1617599051.79	.	16071	205
206	1311594696.84	1128341785.57	1524609538.32	.	16102	206
207	1505120029.59	1270810875.49	1782630560.65	.	16131	207
208	1396024286.87	1174313415.65	1659594264.67	.	16162	208
209	1444398772.79	1210580234.32	1723378389.72	.	16192	209
210	1382178740.21	1154298627.24	1655046644.61	.	16223	210
211	1454114124.95	1210124841.07	1747297317.29	.	16253	211
212	1452893876.53	1204957698.97	1751846241.81	.	16284	212
213	1379181785.85	1139967874.80	1668592984.49	.	16315	213
214	1485218114.47	1223545395.78	1802853294.34	.	16345	214
215	1473412643.40	1209865961.41	1794368043.21	.	16376	215
216	1620016867.42	1325984659.41	1979249633.17	.	16406	216

Forecast of historical and future values of x

intervention model p=(20) q=(1,3)(12) d=(1,12)



Forecast of historical and future values of x
intervention model p=(20) q=(1,3)(12) d=(1,12)

Obs	FORECAST	x	MAD	MSE	MAPE
1	.	442905725	.	.	.
2	.	466003371	.	.	.
3	.	518137719	.	.	.
4	.	470704644	.	.	.
5	.	485453672	.	.	.
6	.	455360000	.	.	.
7	.	512236941	.	.	.
8	.	506682210	.	.	.
9	.	544530278	.	.	.
10	.	568926707	.	.	.
11	.	560096653	.	.	.
12	.	632553772	.	.	.
13	.	562503787	.	.	.
14	592121242.82	610544355	18423112.18	339411062417085	3.0175
15	670887565.30	629473813	41413752.30	1.7150988798E15	6.5791
16	586914335.53	585732909	1181426.53	1395768653118.6	0.2017
17	598911659.06	598399725	511934.06	262076478549.06	0.0856
18	573435768.85	580282931	6847162.15	46883629499303	1.1800
19	650399759.21	629507349	20892410.21	436492804315888	3.3189
20	631355030.84	657423817	26068786.16	679581611811970	3.9653
21	565056321.69	352195950	212860371.69	4.5309537837E16	60.4381
22	449629613.43	339651419	109978194.43	1.2095203249E16	32.3797
23	369472921.18	418566775	49093853.82	2.4102064831E15	11.7290
24	524028012.58	556819633	32791620.42	1.0752903699E15	5.8891
25	529300652.51	542435299	13134646.49	172518938465037	2.4214
26	546624634.22	576358386	29733751.78	884095994986457	5.1589
27	606730057.27	607805335	1075277.73	1156222199323.5	0.1769
28	550469647.96	581724710	31255062.04	976878903168481	5.3728
29	576310670.34	598038105	21727434.66	472081416770499	3.6331
30	556472178.51	578014283	21542104.49	464062265808937	3.7269
31	625177794.40	624438691	739103.40	546273840395.43	0.1184
32	617665282.40	640286373	22621090.60	511713739993243	3.5330
33	496768100.46	567764879	70996778.54	5.0405425625E15	12.5046
34	559347737.67	625673005	66325267.33	4.399041087E15	10.6006
35	595083146.09	617025422	21942275.91	481463472113264	3.5561
36	684587509.98	646587914	37999595.98	1.4439692949E15	5.8769
37	576377682.04	625032153	48654470.96	2.3672575442E15	7.7843
38	640505659.86	598650774	41854885.86	1.7518314703E15	6.9915
39	674666192.45	636769319	37896873.45	1.4361730176E15	5.9514
40	595028572.93	572284703	22743869.93	517283619203210	3.9742
41	502826120.70	405125729	97700391.70	9.5453665387E15	24.1161
42	417209208.32	453731440	36522231.68	1.3338734067E15	8.0493
43	527776709.50	571383456	43606746.50	1.9015483403E15	7.6318
44	626767645.18	605728525	21039120.18	442644577905618	3.4734
45	499877891.83	584196391	84318499.17	7.1096093028E15	14.4332
46	558833582.99	643659315	84825732.01	7.1954048107E15	13.1787
47	620835910.54	588186751	32649159.54	1.0659676185E15	5.5508

48	662652218.06	693440279	30788060.94	947904696316553	4.4399
49	596835155.47	584627354	12207801.47	149030416766135	2.0881
50	628175256.57	626351869	1823387.57	3324742215429.9	0.2911
51	663244315.99	650144308	13100007.99	171610209391607	2.0149
52	610155161.34	619743684	9588522.66	91939766868301	1.5472
53	585914828.62	635242686	49327857.38	2.4332375133E15	7.7652
54	619776468.30	601337518	18438950.30	339994888122830	3.0663
55	681023465.68	660840967	20182498.68	407333252872506	3.0541
56	641539918.15	611296460	30243458.15	914666760663265	4.9474
57	540156141.64	618332965	78176823.36	6.11161571E15	12.6432
58	605463572.20	660269303	54805730.80	3.0036681286E15	8.3005
59	643202595.91	654144429	10941833.09	119723711304940	1.6727
60	710257275.35	693405565	16851710.35	283980141841180	2.4303
61	557923197.41	637558345	79635147.59	6.3417567314E15	12.4906
62	660958450.22	568197083	92761367.22	8.6046712486E15	16.3256
63	679342061.47	686470446	7128384.53	50813866059737	1.0384
64	615463211.27	638890367	23427155.73	548831625443648	3.6669
65	653882168.28	652121471	1760697.28	3100054912908.4	0.2700
66	644550759.85	624995149	19555610.85	382421915702148	3.1289
67	684355803.18	650464902	33890901.18	1.1485931829E15	5.2103
68	669584937.58	661654263	7930674.58	62895599220387	1.1986
69	571460542.67	637217002	65756459.33	4.3239119439E15	10.3193
70	662044903.77	662045989	1085.23	1177718.19	0.0002
71	655051358.89	664114461	9063102.11	82139819775390	1.3647
72	730607055.92	705329845	25277210.92	638937391988065	3.5837
73	669884633.57	637342019	32542614.57	1.0590217629E15	5.1060
74	649907421.48	624455603	25451818.48	647795064137962	4.0758
75	698966451.87	685127626	13838825.87	191513101425534	2.0199
76	632339111.54	637530926	5191814.46	26954937391050	0.8144
77	650165324.38	663661706	13496381.62	182152316903008	2.0336
78	646208846.60	688768807	42559960.40	1.8113502293E15	6.1791
79	743799033.48	722871791	20927242.48	437949478021784	2.8950
80	710645469.36	737966863	27321393.64	746458550608731	3.7023
81	637353399.32	719814854	82461454.68	6.7998915077E15	11.4559
82	695714343.62	732501235	36786891.38	1.3532753774E15	5.0221
83	733848794.95	732115794	1733000.95	3003292293240.7	0.2367
84	790023452.62	786574655	3448797.62	11894205007315	0.4385
85	720002699.81	751063029	31060329.19	964744049096555	4.1355
86	741440821.35	659497496	81943325.35	6.71470857E15	12.4251
87	742991673.98	783940991	40949317.02	1.6768465642E15	5.2235
88	706243441.16	733585805	27342363.84	747604860388296	3.7272
89	751516874.13	763347210	11830335.87	139956846723759	1.5498
90	730355016.22	718462019	11892997.22	141443382914912	1.6553
91	787970953.17	784174820	3796133.17	14410627073591	0.4841
92	771919497.28	759816425	12103072.28	146484358586406	1.5929
93	696285394.33	726986490	30701095.67	942557275230825	4.2231
94	742217364.31	780403719	38186354.69	1.4581976843E15	4.8932
95	768270659.99	797410688	29140028.01	849141232259796	3.6543
96	861708866.07	865942201	4233334.93	17921124669402	0.4889
97	799240584.38	802691648	3451063.62	11909840098706	0.4299
98	792811686.40	730614461	62197225.40	3.8684948481E15	8.5130

99	827712609.25	841216506	13503896.75	182355227371132	1.6053
100	780314536.29	799159062	18844525.71	355116149283623	2.3580
101	823475760.13	832744051	9268290.87	85901215657930	1.1130
102	796903572.37	757700604	39202968.37	1.5368727289E15	5.1739
103	843887936.20	801290710	42597226.20	1.8145236797E15	5.3161
104	804970735.99	837478050	32507314.01	1.0567254642E15	3.8816
105	780065858.99	757753276	22312582.99	497851359817062	2.9446
106	787990715.45	865029361	77038645.55	5.9349529081E15	8.9059
107	846035938.70	817975694	28060244.70	787377332725182	3.4304
108	928373624.81	869983397	58390227.81	3.4094187038E15	6.7116
109	812329670.14	767286241	45043429.14	2.0289105083E15	5.8705
110	757825915.63	788165961	30340045.37	920518352803252	3.8494
111	888791385.47	845255142	43536243.47	1.8954044952E15	5.1507
112	811389626.52	814051205	2661578.48	7084000018880.5	0.3270
113	813430192.02	826798811	13368618.98	178719973469211	1.6169
114	810378686.89	792619499	17759187.89	315388754608111	2.2406
115	877999226.29	861923310	16075916.29	258435084463407	1.8651
116	865547476.76	796868733	68678743.76	4.7167698446E15	8.6186
117	761597615.04	800230012	38632396.96	1.4924620946E15	4.8277
118	826041838.07	848866183	22824344.93	520950721602555	2.6888
119	864396940.20	827818135	36578805.20	1.3380089895E15	4.4187
120	916442130.29	916842742	400611.71	160489743781.07	0.0437
121	842428539.45	874982735	32554195.55	1.0597756482E15	3.7206
122	838239709.58	743910789	94328920.58	8.8979452587E15	12.6801
123	859748546.43	914383754	54635207.57	2.9850059066E15	5.9751
124	839689452.96	857919060	18229607.04	332318572651246	2.1249
125	881607307.73	882412819	805511.27	648848413881.87	0.0913
126	853158325.88	839390599	13767726.88	189550303459376	1.6402
127	899509294.68	902619183	3109888.32	9671405346674.9	0.3445
128	883656324.23	895417550	11761225.77	138326431613136	1.3135
129	824433246.78	846176717	21743470.22	472778497202336	2.5696
130	910386936.18	928609038	18222101.82	332044994759863	1.9623
131	895695302.29	955555954	59860651.71	3.583297623E15	6.2645
132	1025663186.43	1069763763	44100576.57	1.9448608538E15	4.1225
133	967375879.35	988277007	20901127.65	436857137053653	2.1149
134	913457042.86	903345872	10111170.86	102235776114084	1.1193
135	1016399900.07	1042360960	25961059.93	673976632577624	2.4906
136	938817968.61	1005773165	66955196.39	4.4829983234E15	6.6571
137	1016701234.82	992750807	23950427.82	573622992677818	2.4125
138	953080643.92	944566055	8514588.92	72498224520534	0.9014
139	1004064700.99	1022866064	18801363.01	353491251091662	1.8381
140	1018165620.40	1014036823	4128797.40	17046968009736	0.4072
141	965500016.82	1002823893	37323876.18	1.3930717334E15	3.7219
142	1011842250.67	1061261771	49419520.33	2.4422889893E15	4.6567
143	1071561783.03	1044031040	27530743.03	757941811980420	2.6370
144	1150787894.97	1126672930	24114964.97	581531535682205	2.1404
145	1039515418.92	1006923414	32592004.92	1.062238785E15	3.2368
146	969346673.63	1049426114	80079440.37	6.4127167704E15	7.6308
147	1162360471.12	1143165566	19194905.12	368444382689535	1.6791
148	1099276603.17	1060454639	38821964.17	1.5071449022E15	3.6609
149	1056685495.02	1102741251	46055755.98	2.1211326593E15	4.1765

150	1054315340.56	1044311525	10003815.56	100076325722656	0.9579
151	1167503205.36	1102930706	64572499.36	4.1696076742E15	5.8546
152	1110641087.73	1085675052	24966035.73	623302939933007	2.2996
153	1040532416.41	1069707150	29174733.59	851165079873324	2.7274
154	1141051290.27	1149392023	8340732.73	69567822501046	0.7257
155	1154888050.76	1132767384	22120666.76	489323897994380	1.9528
156	1254667125.48	1220914557	33752568.48	1.1392358789E15	2.7645
157	1121904528.45	1150436049	28531520.55	814047664934347	2.4801
158	1102042599.78	1008231182	93811417.78	8.8005821058E15	9.3046
159	1190197594.06	1196214219	6016624.94	36199775678867	0.5030
160	1115568282.86	1101026837	14541445.86	211453647826511	1.3207
161	1171065253.87	1159906990	11158263.87	124506852677495	0.9620
162	1108151116.97	1119544712	11393595.03	129814007679047	1.0177
163	1206766913.87	1156020379	50746534.87	2.5752108015E15	4.3898
164	1161732370.99	1140049956	21682414.99	470127119663550	1.9019
165	1082074168.95	1107748066	25673897.05	659148989978450	2.3177
166	1229312615.72	1202805402	26507213.72	702632379438315	2.2038
167	1197266065.41	1200792434	3526368.59	12435275442667	0.2937
168	1297755263.71	1308597409	10842145.29	117552114587956	0.8285
169	1223845811.50	1221834746	2011065.50	4044384438830.8	0.1646
170	1152255164.29	1143803107	8452057.29	71437272375019	0.7389
171	1295148225.54	1303875250	8727024.46	76160955984464	0.6693
172	1217965647.50	1214869409	3096238.50	9586692870154.2	0.2549
173	1258259765.78	1236885478	21374287.78	456860177999745	1.7281
174	1193327633.29	1155419565	37908068.29	1.4370216412E15	3.2809
175	1253091576.70	1212955380	40136196.70	1.6109142856E15	3.3090
176	1217144456.29	1232940788	15796331.71	249524095409242	1.2812
177	1196935858.78	1175612785	21323073.78	454673475241011	1.8138
178	1251492229.40	1275028225	23535995.60	553943089089917	1.8459
179	1272813306.56	1219180852	53632454.56	2.8764401817E15	4.3991
180	1357364091.46	1368989087	11624995.54	135140521203362	0.8492
181	1269474452.95	1307066108	37591655.05	1.4131325297E15	2.8760
182	1241310464.82	1146264895	95045569.82	9.033660342E15	8.2918
183	1329274868.26	1381154403	51879534.74	2.6914861244E15	3.7562
184	1261290686.25	1272534572	11243885.75	126424966727560	0.8836
185	1334225642.61	1322895872	11329770.61	128363702008114	0.8564
186	1256606440.06	1251238335	5368105.06	28816551891771	0.4290
187	1337625141.56	1301390069	36235072.56	1.3129804831E15	2.7843
188	1312378977.87	1275336046	37042931.87	1.3721788014E15	2.9046
189	1241464372.31	1248577689	7113316.69	50599274271512	0.5697
190	1350603780.56	1364448412	13844631.44	191673819582654	1.0147
191	1354596842.39	1330728344	23868498.39	569705215367522	1.7936
192	1470309096.63	1450240499	20068597.63	402748610733554	1.3838
193	1352424239.41	1353556428	1132188.59	1281851011256.7	0.0836
194	1258288757.60	1215584585	42704172.60	1.8236463571E15	3.5131
195	1420349669.98	1421920706	1571036.02	2468154185056.5	0.1105
196	1338485518.15	1306259500	32226018.15	1.038516246E15	2.4670
197	1364273105.29	1358766172	5506933.29	30326314236488	0.4053
198	1300542006.24	1288514496	12027510.24	144661002574722	0.9334
199	1370061328.16	1318141011	51920317.16	2.695719334E15	3.9389
200	1341819701.08	1365774580	23954878.92	573836223964732	1.7539

201	1321129947.21	1219229971	101899976.21	1.0383605152E16	8.3577
202	1348410651.05	1361171049	12760397.95	162827755749368	0.9375
203	1351059798.85	1353551250	2491451.15	6207328845938.2	0.1841
204	1518463863.37	1523753795	5289931.63	27983376639474	0.3472
205	1421707873.89	.	.	.	.
206	1311594696.84	.	.	.	.
207	1505120029.59	.	.	.	.
208	1396024286.87	.	.	.	.
209	1444398772.79	.	.	.	.
210	1382178740.21	.	.	.	.
211	1454114124.95	.	.	.	.
212	1452893876.53	.	.	.	.
213	1379181785.85	.	.	.	.
214	1485218114.47	.	.	.	.
215	1473412643.40	.	.	.	.
216	1620016867.42	.	.	.	.

Forecast of historical and future values of x
intervention model p=(20) q=(1,3)(12) d=(1,12)

The MEANS Procedure

Variable	Mean
MAD	30327314.70
MSE	1.668273E15
MAPE	4.1329651