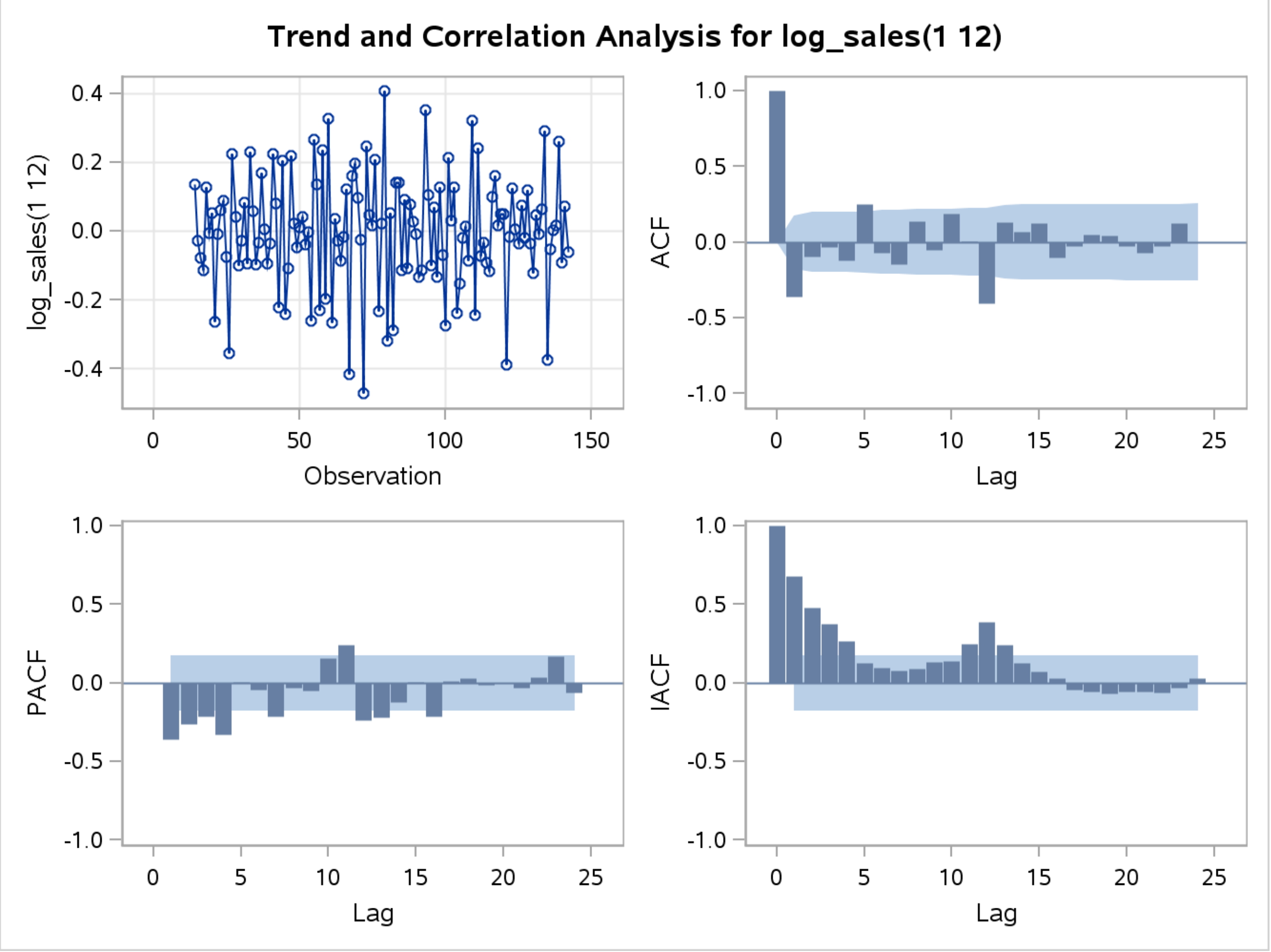
Appendix 1 Assignment 8

The ARIMA Procedure

Name of Variable = log_sales	
Period(s) of Differencing	1,12
Mean of Working Series	-0.00025
Standard Deviation	0.166026
Number of Observations	129
Observation(s) eliminated by differencing	13

Autocorrelation Check for White Noise

To Lag	Chi-Square	DF	Pr > ChiSq	Autocorrelations					
6	29.93	6	<.0001	-0.362	-0.098	-0.034	-0.124	0.249	-0.072
12	64.97	12	<.0001	-0.149	0.137	-0.056	0.189	0.007	-0.406
18	72.45	18	<.0001	0.130	0.064	0.124	-0.105	-0.026	0.048
24	76.15	24	<.0001	0.043	-0.029	-0.071	-0.031	0.122	-0.005



Appendix 1 Assignment 8

The ARIMA Procedure

Conditional Least Squares Estimation					
Parameter	**Estimate**	**Standard Error**	**t Value**	**Approx Pr > |t|**	**Lag**
MU	-0.0003446	0.0054268	-0.06	0.9495	0
AR1,1	-0.46702	0.08014	-5.83	<.0001	1
AR2,1	-0.53971	0.08133	-6.64	<.0001	12

Constant Estimate	-0.00078
Variance Estimate	0.018271
Std Error Estimate	0.135171
AIC	-147.262
SBC	-138.683
Number of Residuals	129

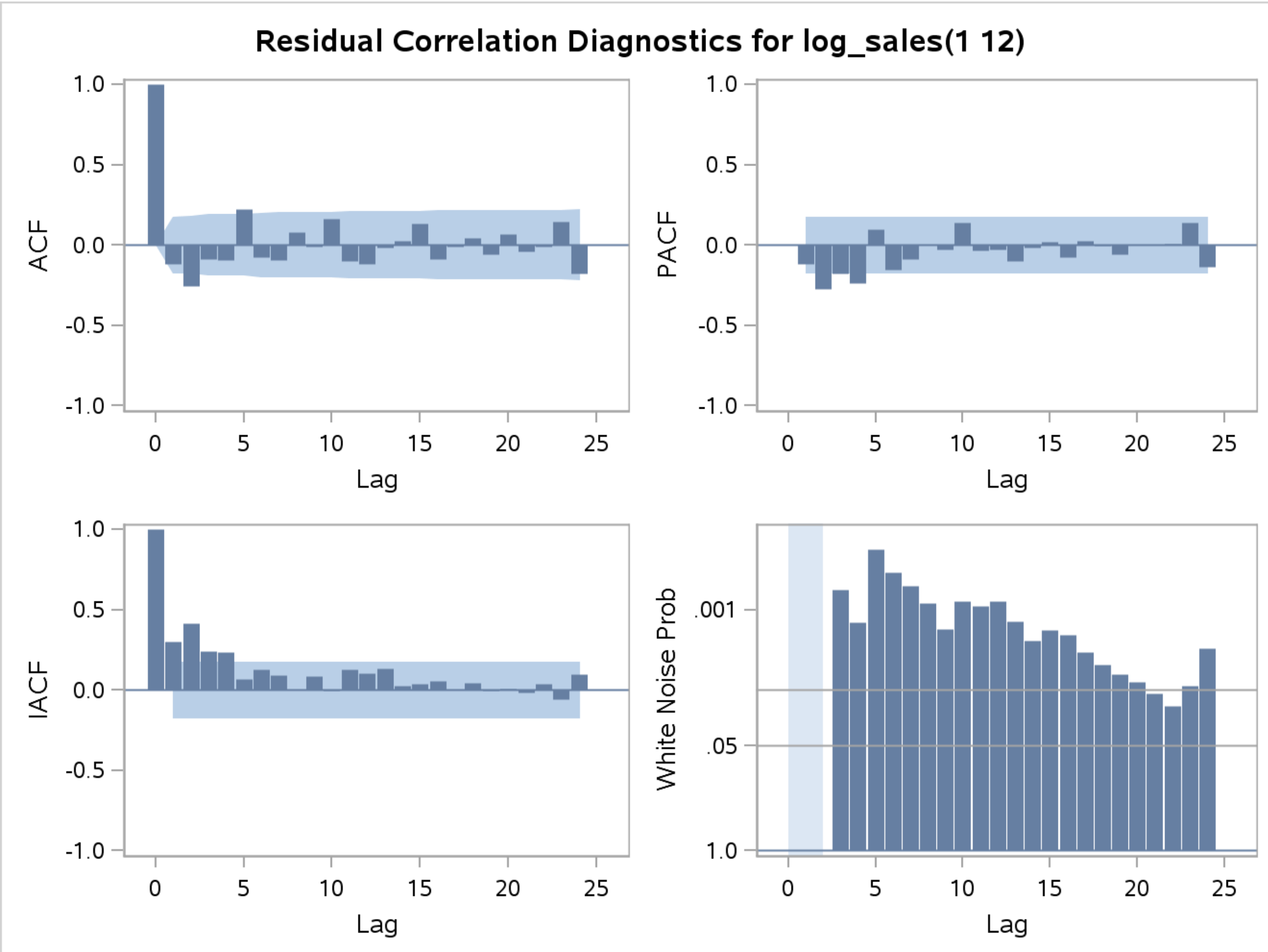
*** AIC and SBC do not include log determinant.**

Correlations of Parameter Estimates			
Parameter	**MU**	**AR1,1**	**AR2,1**
MU	1.000	-0.002	0.010
AR1,1	-0.002	1.000	0.165
AR2,1	0.010	0.165	1.000

Autocorrelation Check of Residuals									
To Lag	**Chi-Square**	**DF**	**Pr > ChiSq**	**Autocorrelations**					
6	20.80	4	0.0003	-0.121	-0.258	-0.091	-0.093	0.224	-0.080
12	30.23	10	0.0008	-0.096	0.077	-0.013	0.164	-0.100	-0.120
18	34.33	16	0.0049	-0.018	0.023	0.129	-0.089	-0.012	0.044
24	44.49	22	0.0031	-0.062	0.065	-0.043	-0.010	0.146	-0.180

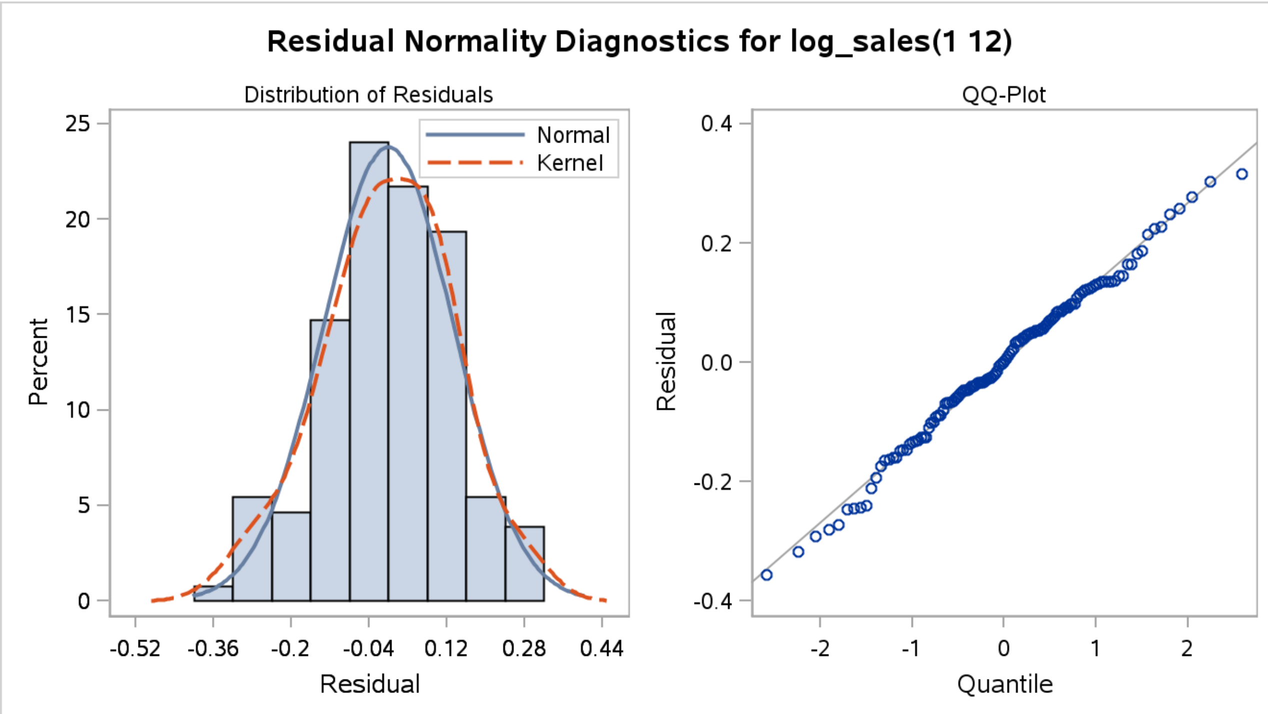
Appendix 1 Assignment 8

The ARIMA Procedure



Appendix 1 Assignment 8

The ARIMA Procedure



Model for variable log_sales	
Estimated Mean	-0.00034
Period(s) of Differencing	1,12

Autoregressive Factors	
Factor 1:	1 + 0.46702 B**(1)
Factor 2:	1 + 0.53971 B**(12)