The SAS System

Obs	TEST	OBS	ESTIMATE	ACTUAL	DIFF
1	BASELINE	1	2	7	-5
2	BASELINE	2	25	39	-14
3	BASELINE	3	35	49	-14
4	BASELINE	4	20	34	-14
5	BASELINE	5	5	8	-3
6	BASELINE	6	50	57	-7
7	BASELINE	7	5	14	-9
8	BASELINE	8	50	57	-7
9	BASELINE	9	60	73	-13
10	BASELINE	10	2	9	-7
11	BASELINE	11	10	22	-12
12	BASELINE	12	15	32	-17
13	BASELINE	13	50	56	-6
14	BASELINE	14	10	21	-11
15	BASELINE	15	5	10	-5
16	BASELINE	16	20	36	-16
17	BASELINE	17	70	80	-10
18	BASELINE	18	50	59	-9
19	BASELINE	19	10	22	-12
20	BASELINE	20	75	79	-4
21	POST1	1	25	34	-9
22	POST1	2	5	7	-2
23	POST1	3	50	49	1
24	POST1	4	20	22	-2
25	POST1	5	30	32	-2
26	POST1	6	10	8	2
27	POST1	7	60	57	3
28	POST1	8	10	14	-4
29	POST1	9	70	73	-3
30	POST1	10	50	56	-6
31	POST1	11	15	21	-6
32	POST1	12	20	22	-2

33	POST1	13	30	36	-6
34	POST1	14	70	80	-10
35	POST1	15	10	9	1
36	POST1	16	25	39	-14
37	POST1	17	55	57	-2
38	POST1	18	10	10	0
39	POST1	19	60	59	1
40	POST1	20	80	79	1
41	POST2	1	35	38	-3
42	POST2	2	20	20	0
43	POST2	3	25	25	0
44	POST2	4	30	38	-8
45	POST2	5	25	29	-4
46	POST2	6	80	68	12
47	POST2	7	20	31	-11
48	POST2	8	80	74	6
49	POST2	9	5	6	-1
50	POST2	10	10	17	-7
51	POST2	11	25	43	-18
52	POST2	12	15	28	-13
53	POST2	13	60	62	-2
54	POST2	14	20	29	-9
55	POST2	15	25	30	-5
56	POST2	16	75	63	12
57	POST2	17	80	71	9
58	POST2	18	20	38	-18
59	POST2	19	80	74	6
60	POST2	20	10	11	-1

The SAS System

The UNIVARIATE Procedure
Variable: DIFF

TEST=BASELINE

Moments			
N	20	Sum Weights	20
Mean	-9.75	Sum Observations	-195
Std Deviation	4.16596485	Variance	17.3552632
Skewness	-0.0700649	Kurtosis	-1.1432942
Uncorrected SS	2231	Corrected SS	329.75
Coeff Variation	-42.727845	Std Error Mean	0.93153806

Basic Statistical Measures			
Location		Variability	
Mean	-9.7500	Std Deviation	4.16596
Median	-9.5000	Variance	17.35526
Mode	-14.0000	Range	14.00000
		Interquartile Range	7.00000

Note: The mode displayed is the smallest of 2 modes with a count of 3.

Tests for Location: Mu0=0				
Test		Statistic	p Value	
Student's t	t	-10.4666	Pr > |t|	<.0001
Sign	M	-10	Pr >= |M|	<.0001
Signed Rank	S	-105	Pr >= |S|	<.0001

| Tests for Normality				
Test		Statistic	p Value	
Shapiro-Wilk	W	0.958351	Pr < W	0.5115
Kolmogorov-Smirnov	D	0.145409	Pr > D	>0.1500
Cramer-von Mises	W-Sq	0.050217	Pr > W-Sq	>0.2500
Anderson-Darling	A-Sq	0.312855	Pr > A-Sq	>0.2500

Quantiles (Definition 5)

Level	Quantile
100% Max	-3.0
99%	-3.0
95%	-3.5
90%	-4.5
75% Q3	-6.5
50% Median	-9.5
25% Q1	-13.5
10%	-15.0
5%	-16.5
1%	-17.0
0% Min	-17.0

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
-17	12	-6	13
-16	16	-5	1
-14	4	-5	15
-14	3	-4	20
-14	2	-3	5

Frequency Counts			
		Percents	
Value	Count	Cell	Cum
-17	1	5.0	5.0
-16	1	5.0	10.0
-14	3	15.0	25.0
-13	1	5.0	30.0
-12	2	10.0	40.0
-11	1	5.0	45.0
-10	1	5.0	50.0
-9	2	10.0	60.0
-7	3	15.0	75.0
-6	1	5.0	80.0

-5	2	10.0	90.0
-4	1	5.0	95.0
-3	1	5.0	100.0

Distribution and Probability Plot for DIFF
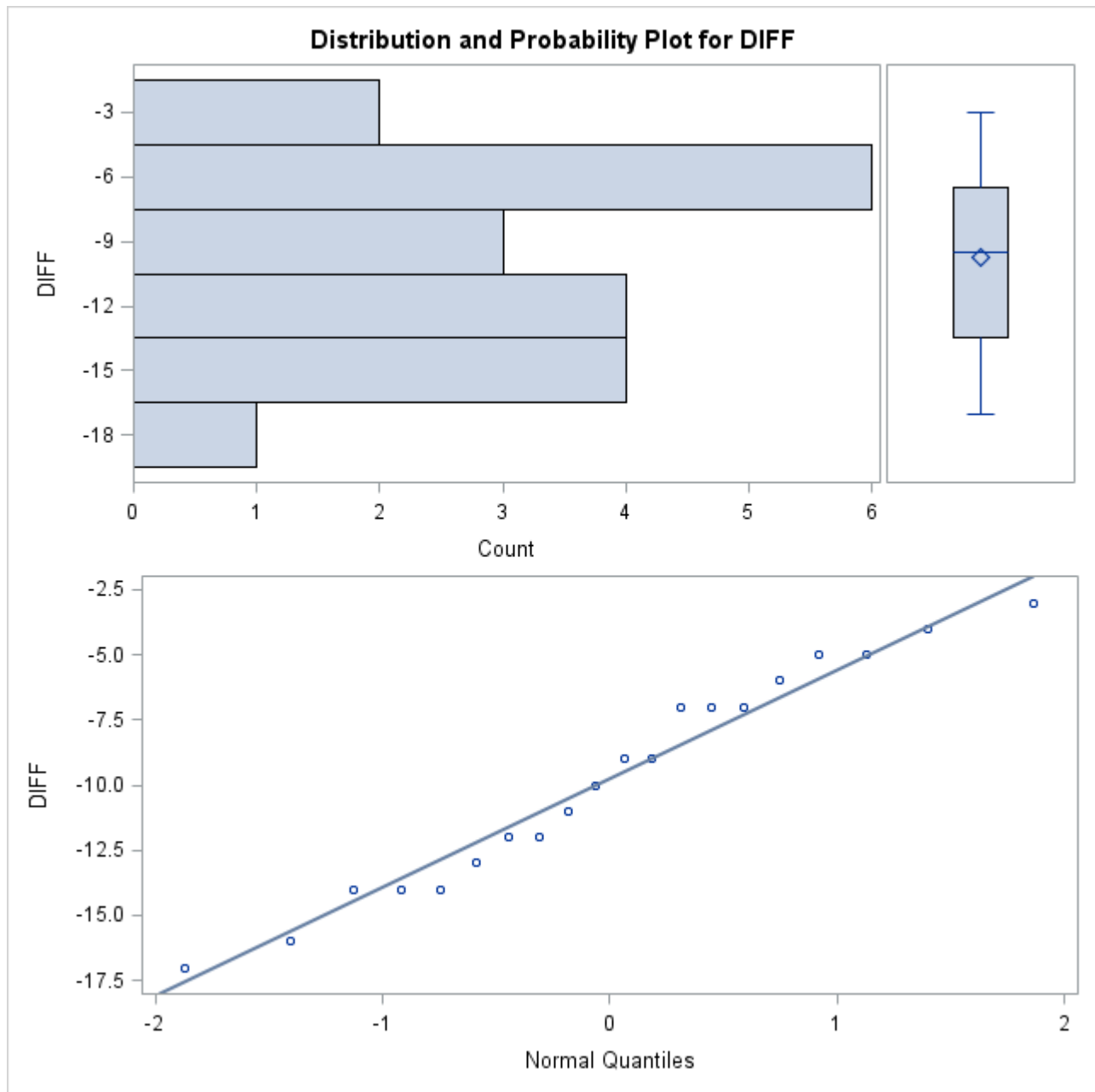
The SAS System

The UNIVARIATE Procedure
Variable: DIFF

TEST=POST1

Moments			
N	20	Sum Weights	20
Mean	-2.95	Sum Observations	-59
Std Deviation	4.43045679	Variance	19.6289474
Skewness	-0.940717	Kurtosis	0.56443459
Uncorrected SS	547	Corrected SS	372.95
Coeff Variation	-150.18498	Std Error Mean	0.99068026

Basic Statistical Measures			
Location		Variability	
Mean	-2.95000	Std Deviation	4.43046
Median	-2.00000	Variance	19.62895
Mode	-2.00000	Range	17.00000
		Interquartile Range	7.00000

Tests for Location: Mu0=0				
Test		Statistic	p Value	
Student's t	t	-2.97775	Pr > |t|	0.0077
Sign	M	-3.5	Pr >= |M|	0.1671
Signed Rank	S	-66	Pr >= |S|	0.0057

| Tests for Normality				
Test		Statistic	p Value	
Shapiro-Wilk	W	0.919238	Pr < W	0.0958
Kolmogorov-Smirnov	D	0.184892	Pr > D	0.0729
Cramer-von Mises	W-Sq	0.102634	Pr > W-Sq	0.0973
Anderson-Darling	A-Sq	0.609281	Pr > A-Sq	0.0981

Quantiles (Definition 5)	
Level	Quantile
100% Max	3.0

99%	3.0
95%	2.5
90%	1.5
75% Q3	1.0
50% Median	-2.0
25% Q1	-6.0
10%	-9.5
5%	-12.0
1%	-14.0
0% Min	-14.0

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
-14	36	1	35
-10	34	1	39
-9	21	1	40
-6	33	2	26
-6	31	3	27

Frequency Counts			
		Percents	
Value	**Count**	**Cell**	**Cum**
-14	1	5.0	5.0
-10	1	5.0	10.0
-9	1	5.0	15.0
-6	3	15.0	30.0
-4	1	5.0	35.0
-3	1	5.0	40.0
-2	5	25.0	65.0
0	1	5.0	70.0
1	4	20.0	90.0
2	1	5.0	95.0
3	1	5.0	100.0

Distribution and Probability Plot for DIFF
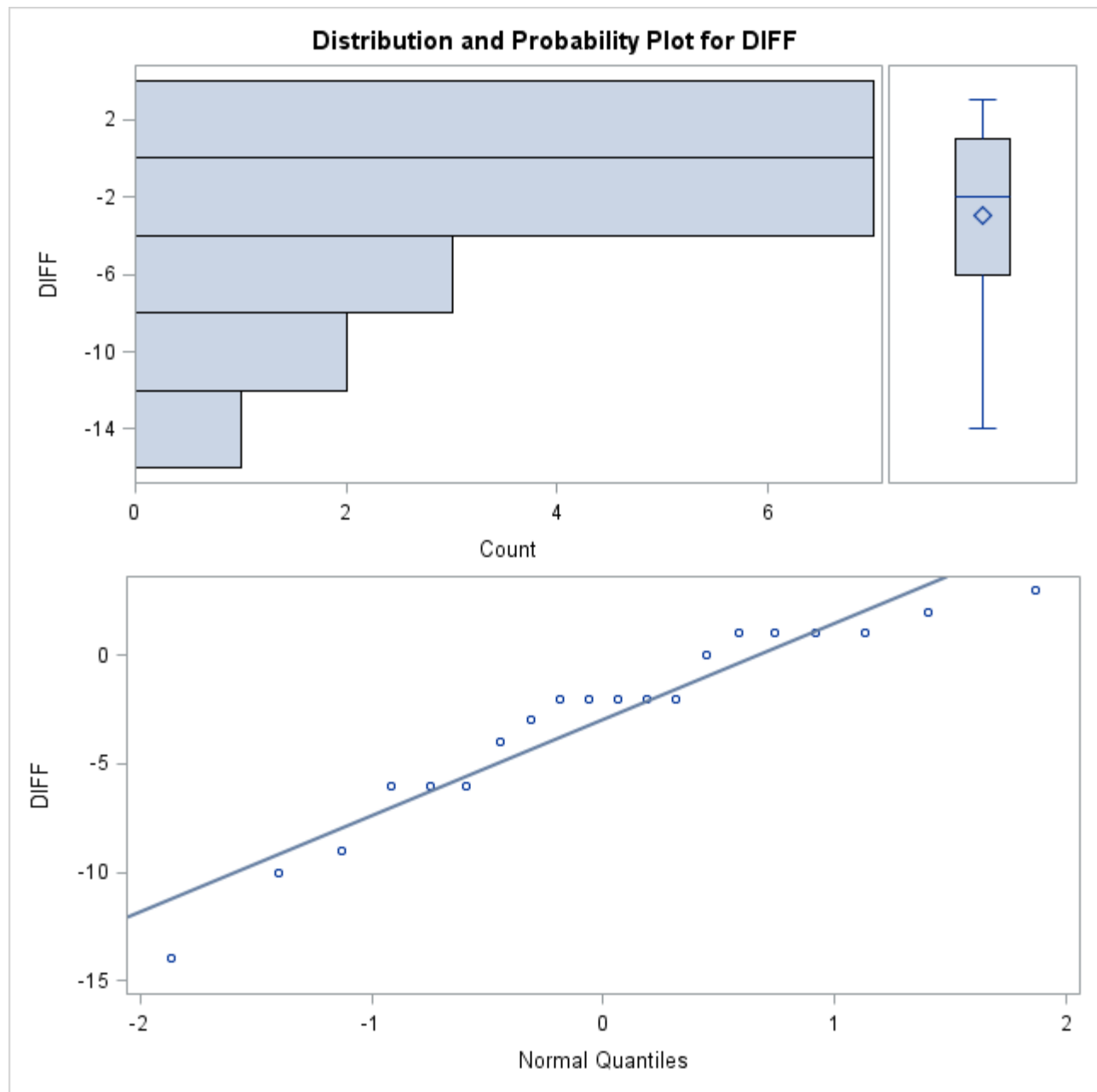
The SAS System

The UNIVARIATE Procedure
Variable: DIFF

TEST=POST2

Moments			
N	20	Sum Weights	20
Mean	-2.75	Sum Observations	-55
Std Deviation	8.81908815	Variance	77.7763158
Skewness	0.01895915	Kurtosis	-0.5290218
Uncorrected SS	1629	Corrected SS	1477.75
Coeff Variation	-320.69411	Std Error Mean	1.97200806

Basic Statistical Measures			
Location		Variability	
Mean	-2.7500	Std Deviation	8.81909
Median	-2.5000	Variance	77.77632
Mode	-18.0000	Range	30.00000
		Interquartile Range	11.50000

Note: The mode displayed is the smallest of 5 modes with a count of 2.

Tests for Location: Mu0=0				
Test		Statistic	p Value	
Student's t	t	-1.39452	Pr > |t|	0.1793
Sign	M	-4	Pr >= |M|	0.0963
Signed Rank	S	-30	Pr >= |S|	0.2005

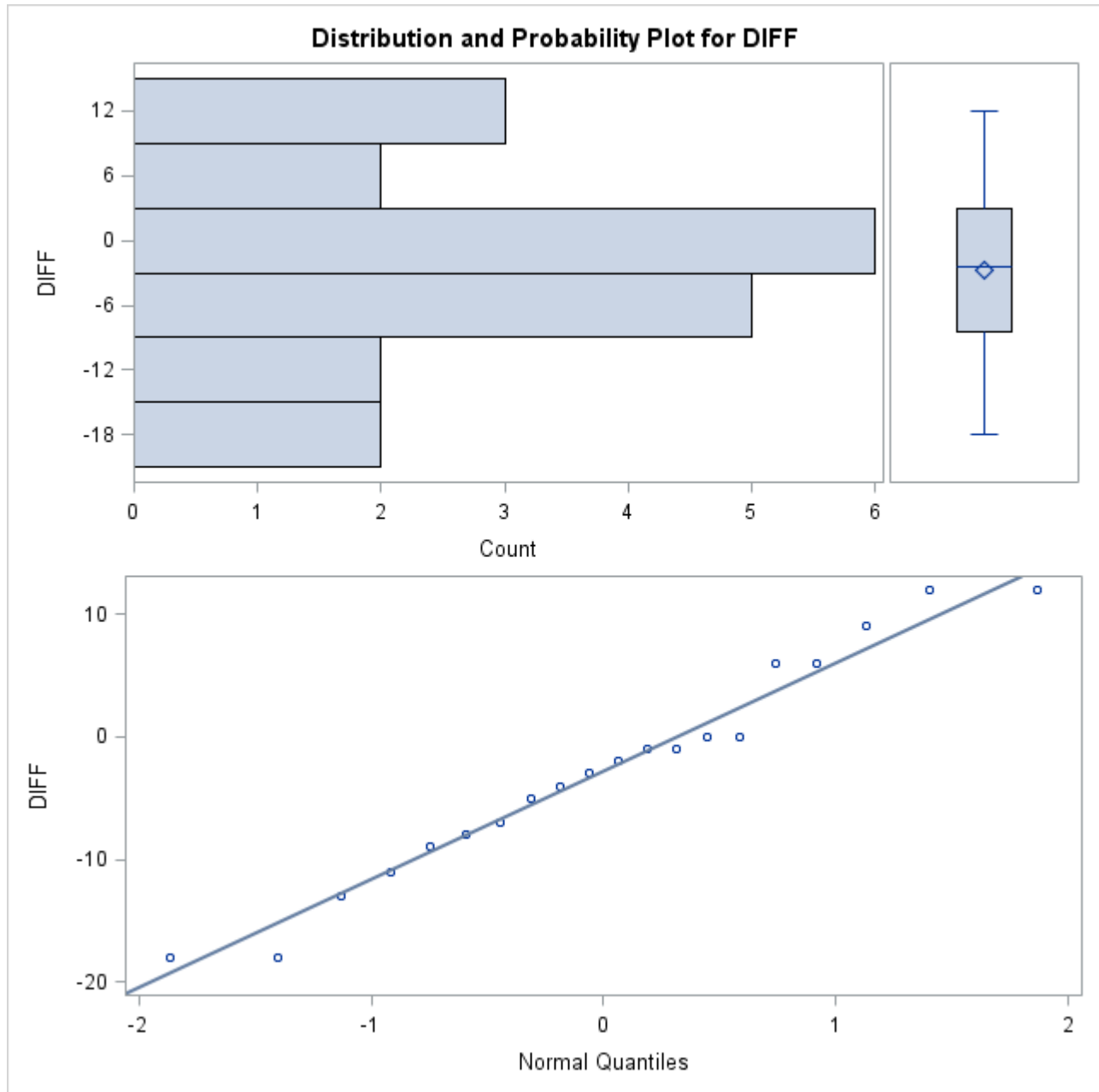| Tests for Normality				
Test		Statistic	p Value	
Shapiro-Wilk	W	0.964537	Pr < W	0.6379
Kolmogorov-Smirnov	D	0.127587	Pr > D	>0.1500
Cramer-von Mises	W-Sq	0.029274	Pr > W-Sq	>0.2500
Anderson-Darling	A-Sq	0.218818	Pr > A-Sq	>0.2500

Quantiles (Definition 5)

Level	Quantile
100% Max	12.0
99%	12.0
95%	12.0
90%	10.5
75% Q3	3.0
50% Median	-2.5
25% Q1	-8.5
10%	-15.5
5%	-18.0
1%	-18.0
0% Min	-18.0

Extreme Observations			
Lowest		**Highest**	
Value	**Obs**	**Value**	**Obs**
-18	58	6	48
-18	51	6	59
-13	52	9	57
-11	47	12	46
-9	54	12	56

Frequency Counts			
		Percents	
Value	**Count**	**Cell**	**Cum**
-18	2	10.0	10.0
-13	1	5.0	15.0
-11	1	5.0	20.0
-9	1	5.0	25.0
-8	1	5.0	30.0
-7	1	5.0	35.0
-5	1	5.0	40.0
-4	1	5.0	45.0
-3	1	5.0	50.0
-2	1	5.0	55.0

-1	2	10.0	65.0
0	2	10.0	75.0
6	2	10.0	85.0
9	1	5.0	90.0
12	2	10.0	100.0

Distribution and Probability Plot for DIFF

Distribution of DIFF by BY Group
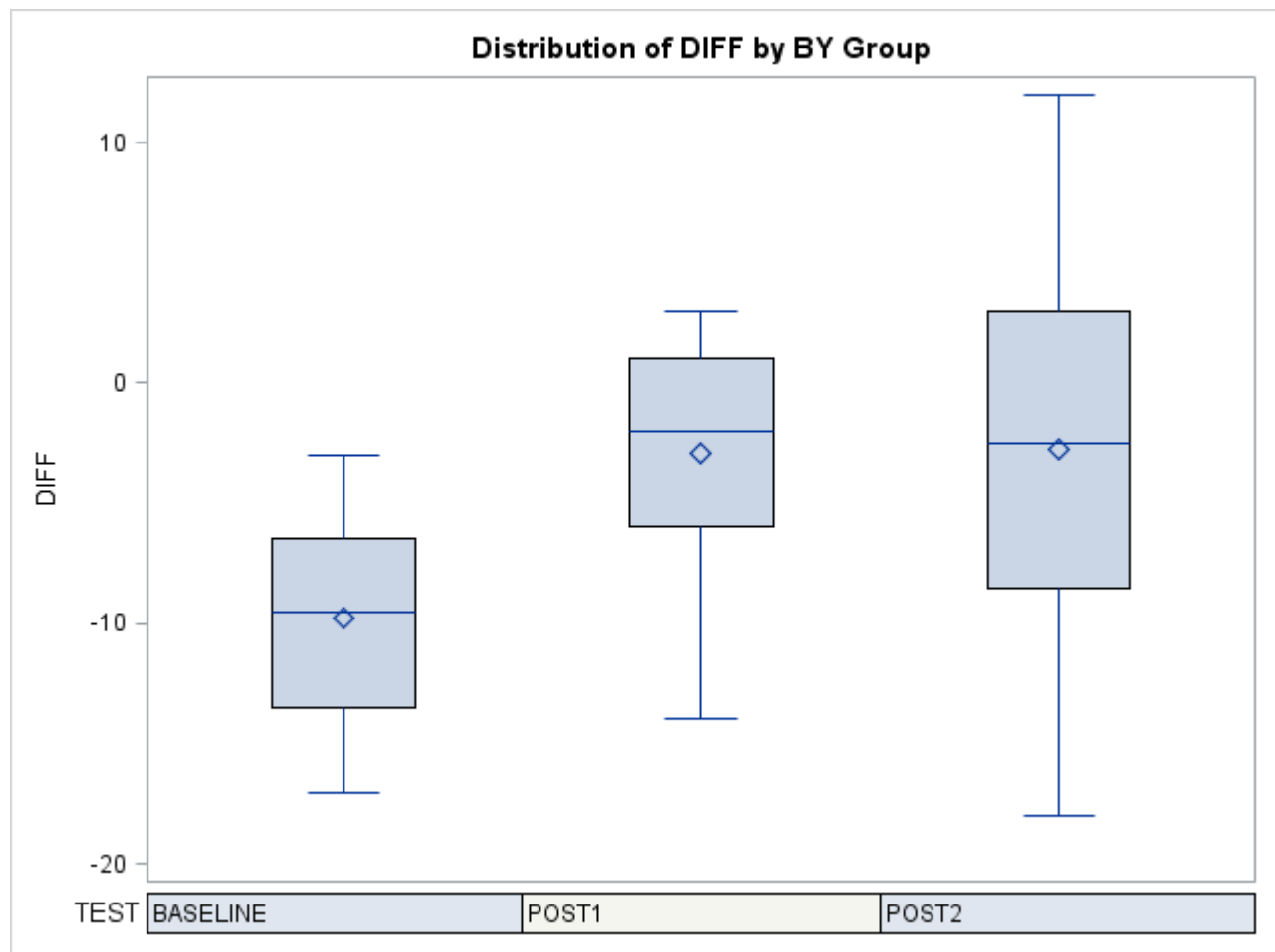
The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: ESTIMATE

TEST=BASELINE

Number of Observations Read	20
Number of Observations Used	20

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	10868	10868	597.69	<.0001
Error	18	327.28903	18.18272		
Corrected Total	19	11195			

Root MSE	4.26412	R-Square	0.9708
Dependent Mean	28.45000	Adj R-Sq	0.9691
Coeff Var	14.98812		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-9.18368	1.81073	-5.07	<.0001
ACTUAL	1	0.98517	0.04030	24.45	<.0001

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: ESTIMATE

TEST=BASELINE

Fit Diagnostics for ESTIMATE

Observations	20
Parameters	2
Error DF	18
MSE	18.183
R-Square	0.9708
Adj R-Square	0.9691

Residuals for ESTIMATE

Fit Plot for ESTIMATE

Observations	20
Parameters	2
Error DF	18
MSE	18.183
R-Square	0.9708
Adj R-Square	0.9691
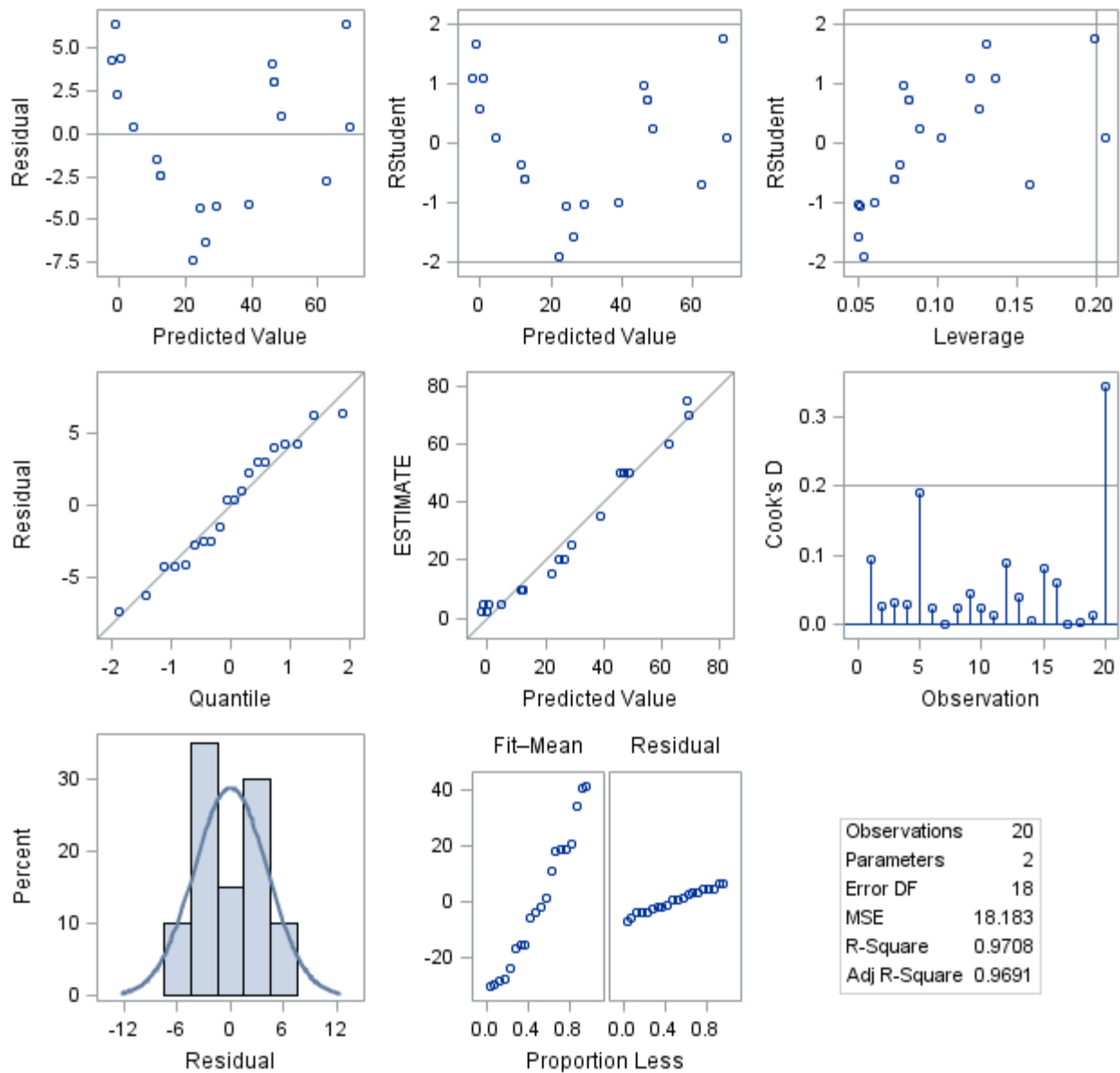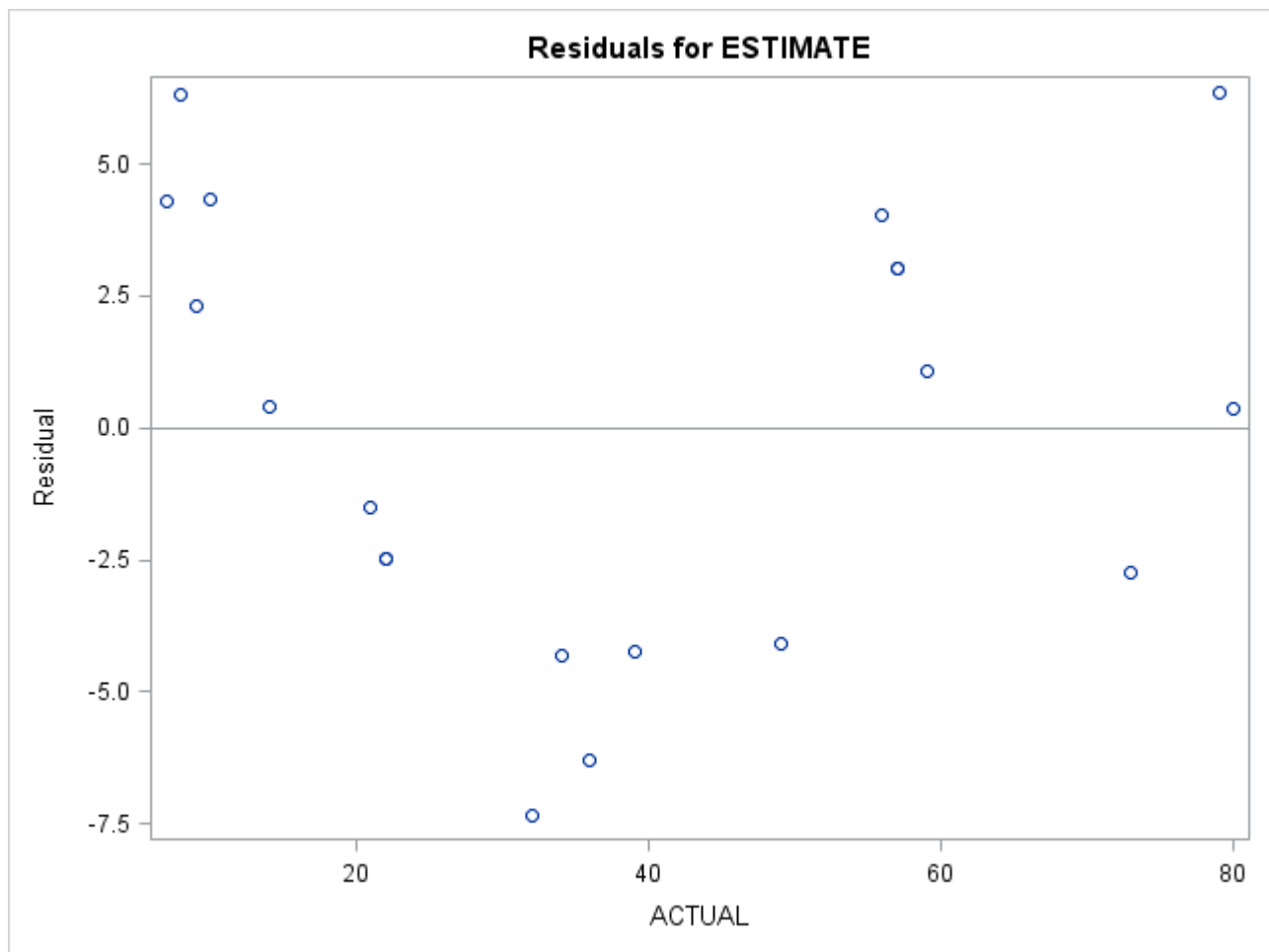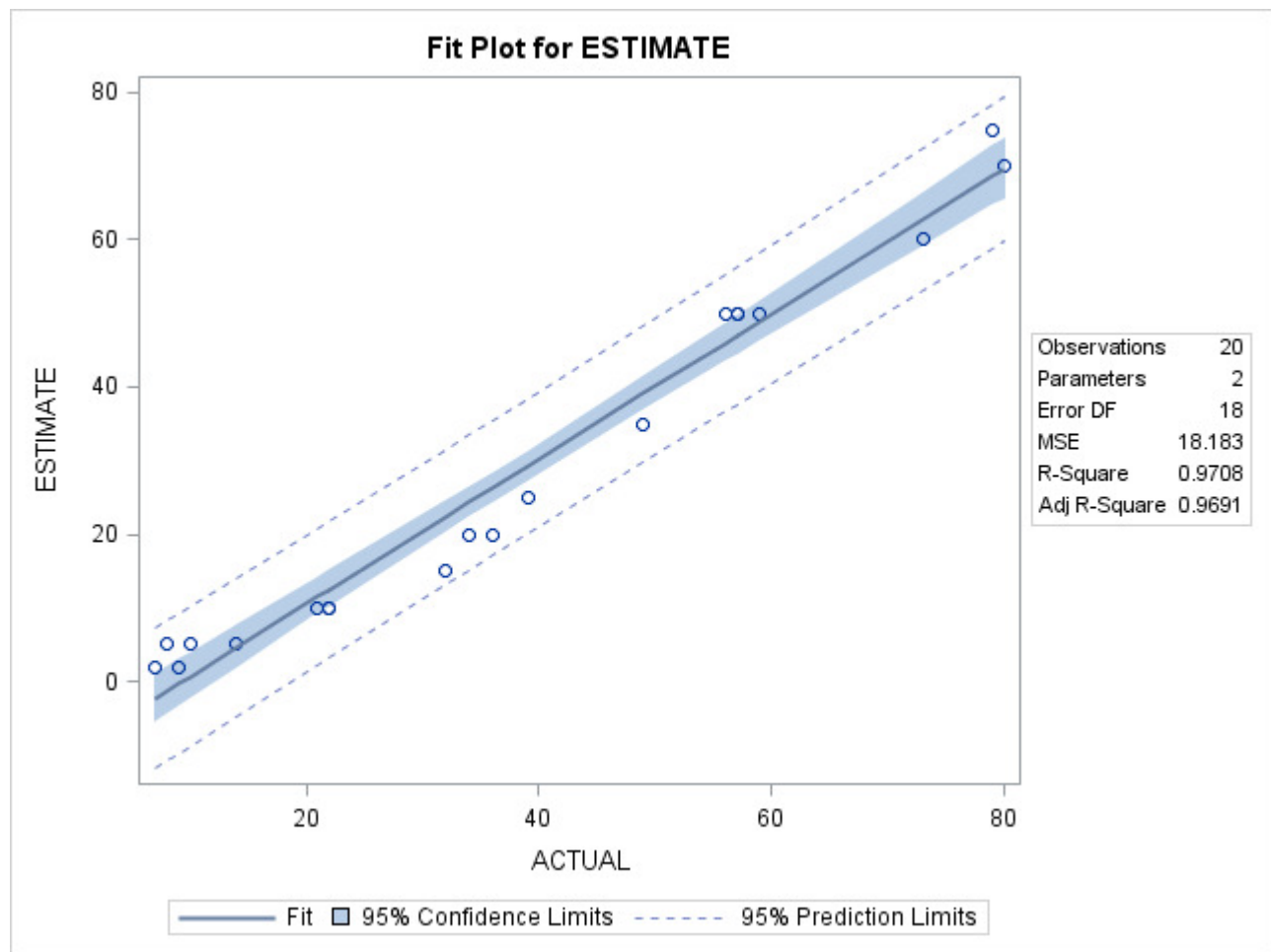
The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: DIFF

TEST=BASELINE

Number of Observations Read	20
Number of Observations Used	20

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	2.46097	2.46097	0.14	0.7172
Error	18	327.28903	18.18272		
Corrected Total	19	329.75000			

Root MSE	4.26412	R-Square	0.0075
Dependent Mean	-9.75000	Adj R-Sq	-0.0477
Coeff Var	-43.73457		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-9.18368	1.81073	-5.07	<.0001
ACTUAL	1	-0.01483	0.04030	-0.37	0.7172

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: DIFF

TEST=BASELINE

Fit Diagnostics for DIFF

Observations	20
Parameters	2
Error DF	18
MSE	18.183
R-Square	0.0075
Adj R-Square	-0.048

Residuals for DIFF

Fit Plot for DIFF

Observations	20
Parameters	2
Error DF	18
MSE	18.183
R-Square	0.0075
Adj R-Square	-0.048
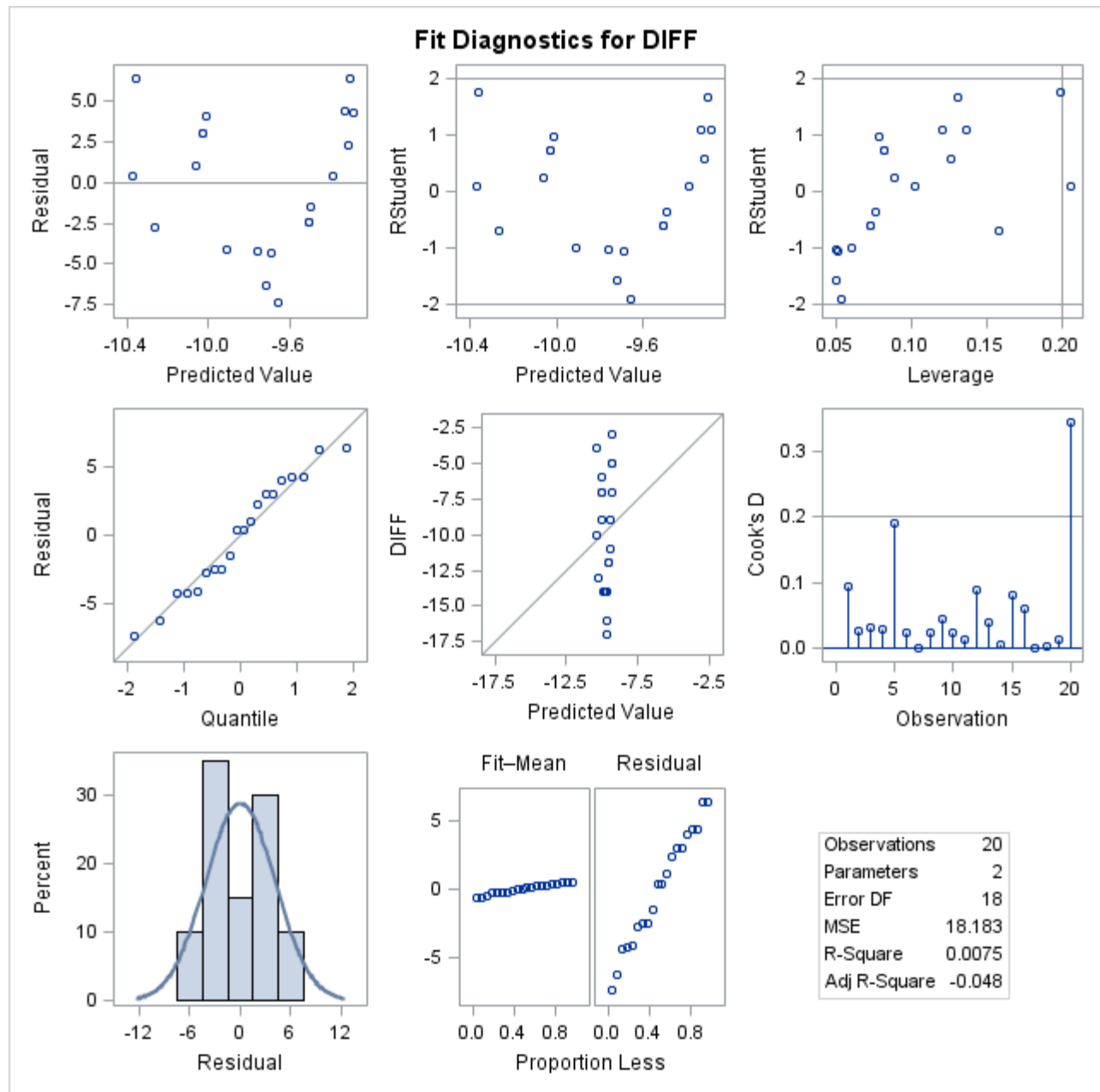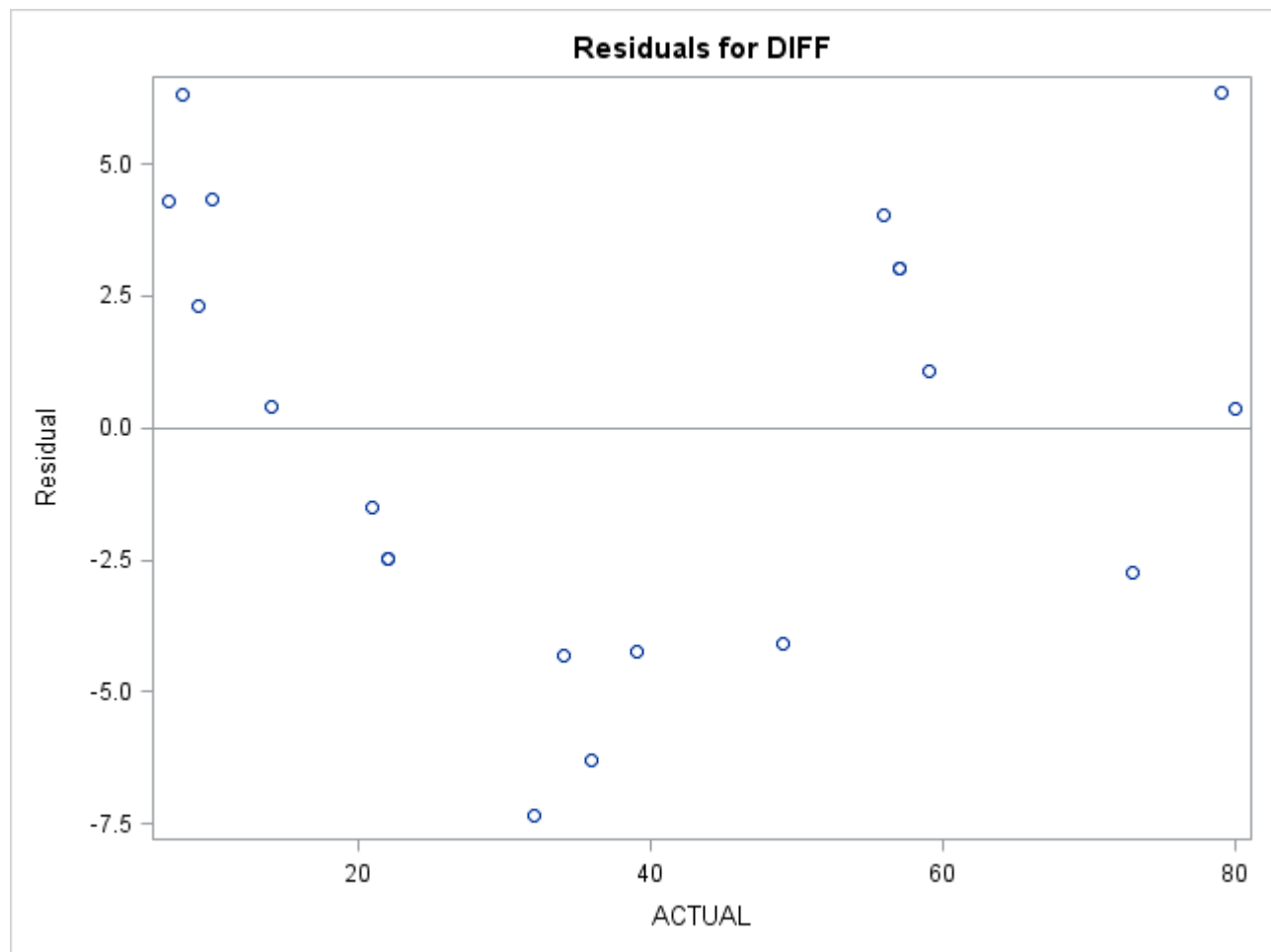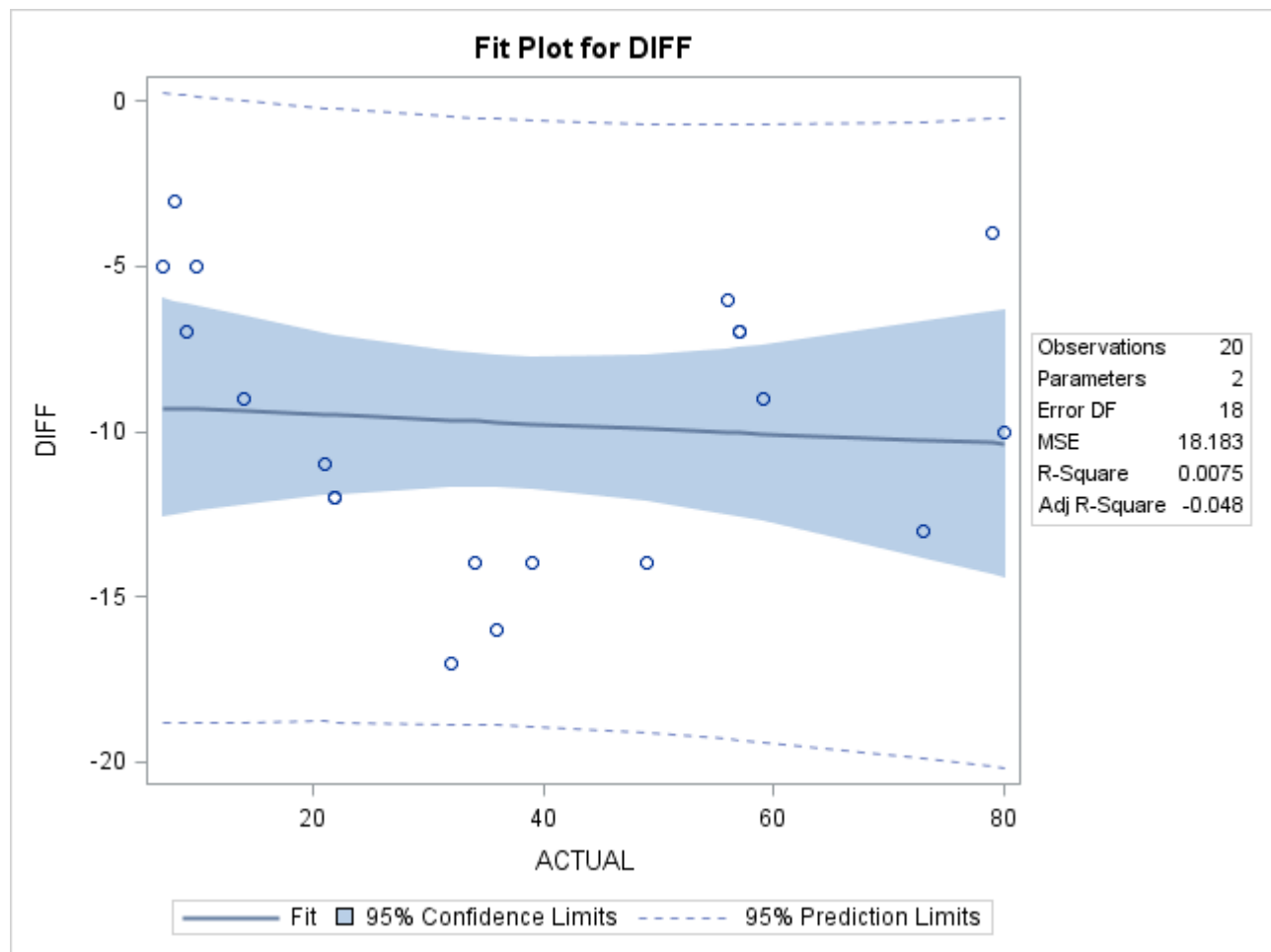
The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: ESTIMATE

TEST=POST1

Number of Observations Read	20
Number of Observations Used	20

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	10706	10706	524.46	<.0001
Error	18	367.44834	20.41380		
Corrected Total	19	11074			

Root MSE	4.51816	R-Square	0.9668
Dependent Mean	35.25000	Adj R-Sq	0.9650
Coeff Var	12.81748		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-2.10325	1.91861	-1.10	0.2874
ACTUAL	1	0.97783	0.04270	22.90	<.0001

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: ESTIMATE

TEST=POST1

Fit Diagnostics for ESTIMATE

Observations	20
Parameters	2
Error DF	18
MSE	20.414
R-Square	0.9668
Adj R-Square	0.965

Residuals for ESTIMATE

Fit Plot for ESTIMATE

Observations	20
Parameters	2
Error DF	18
MSE	20.414
R-Square	0.9668
Adj R-Square	0.965

Fit   95% Confidence Limits   95% Prediction Limits
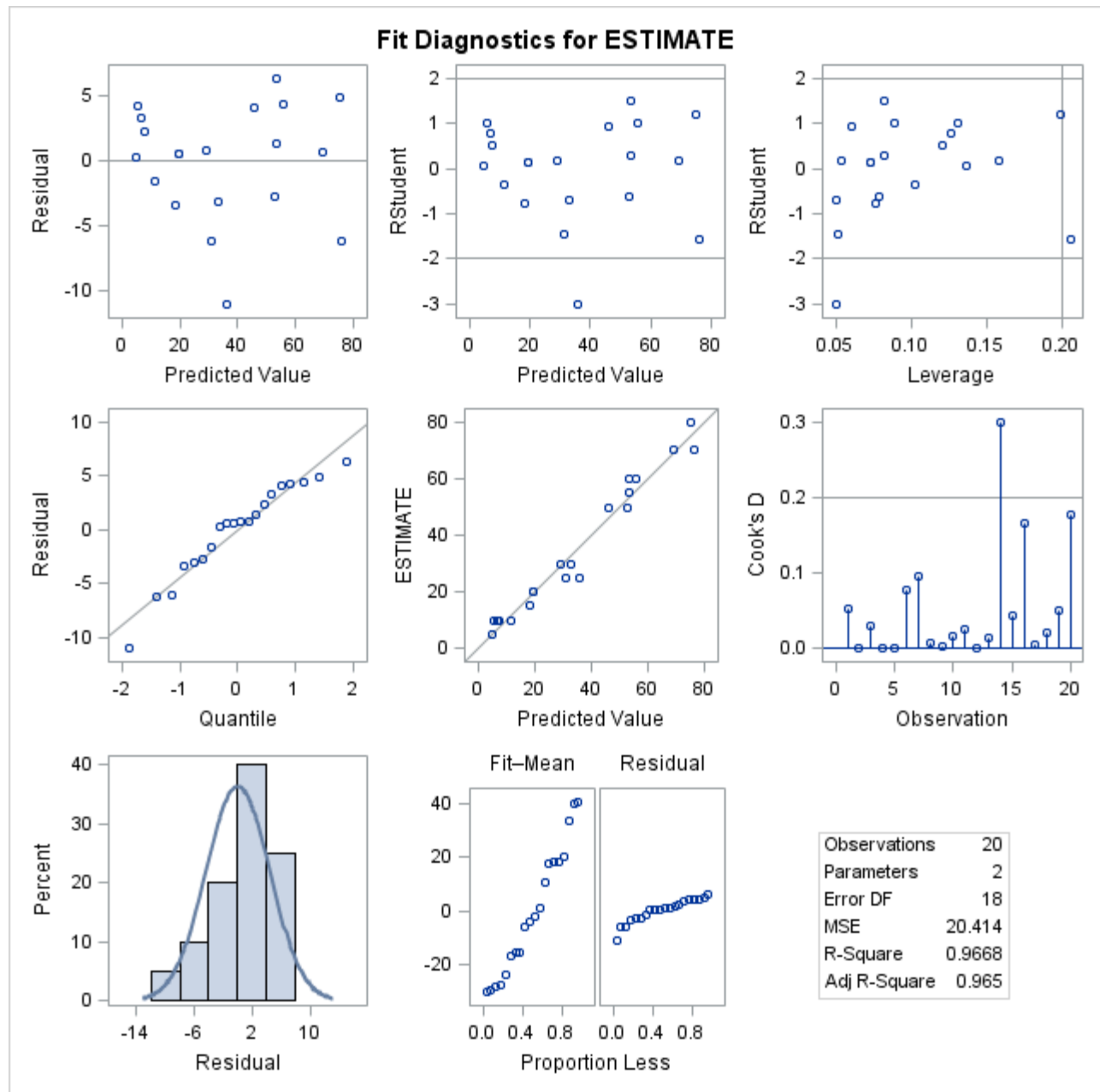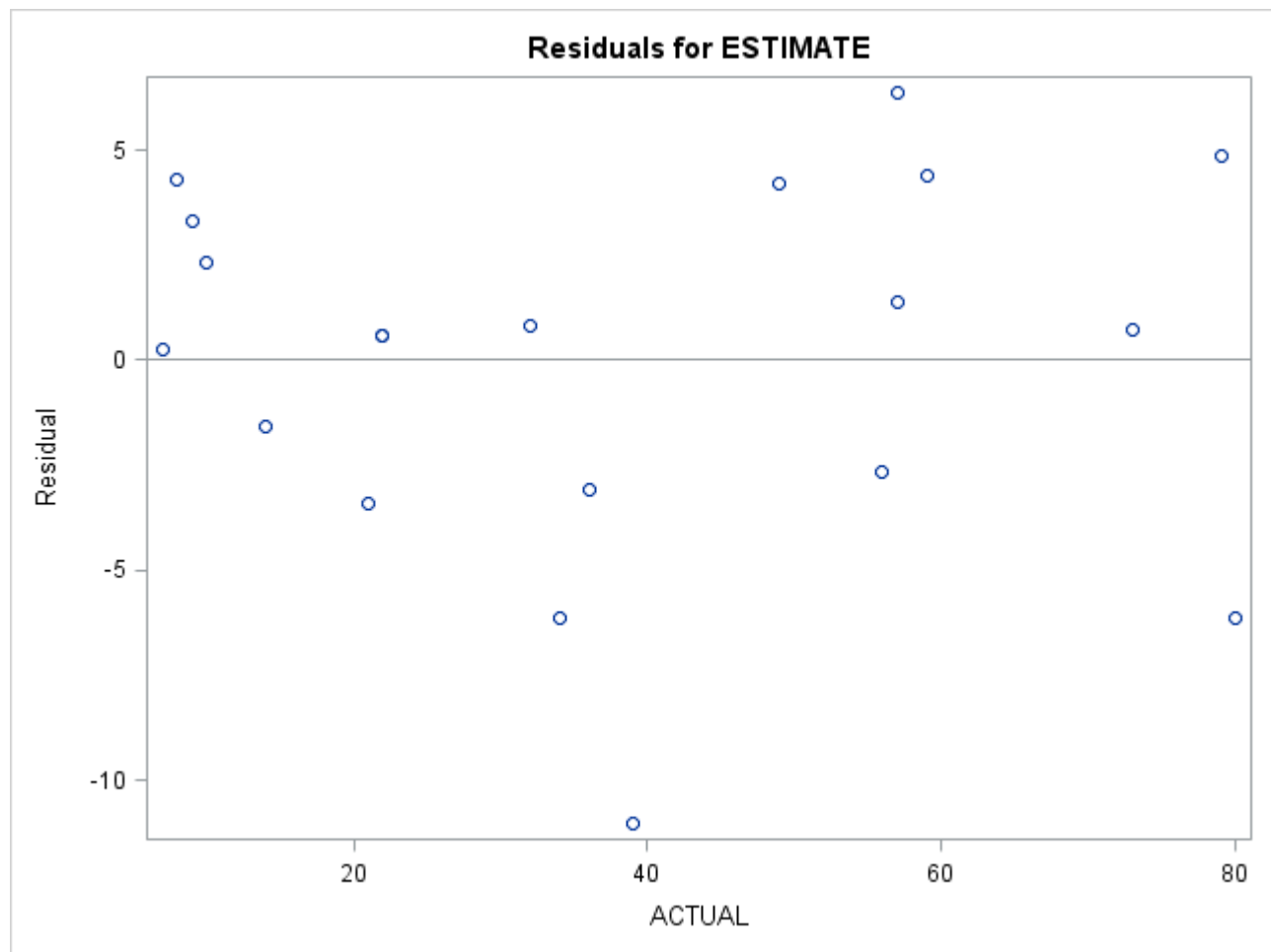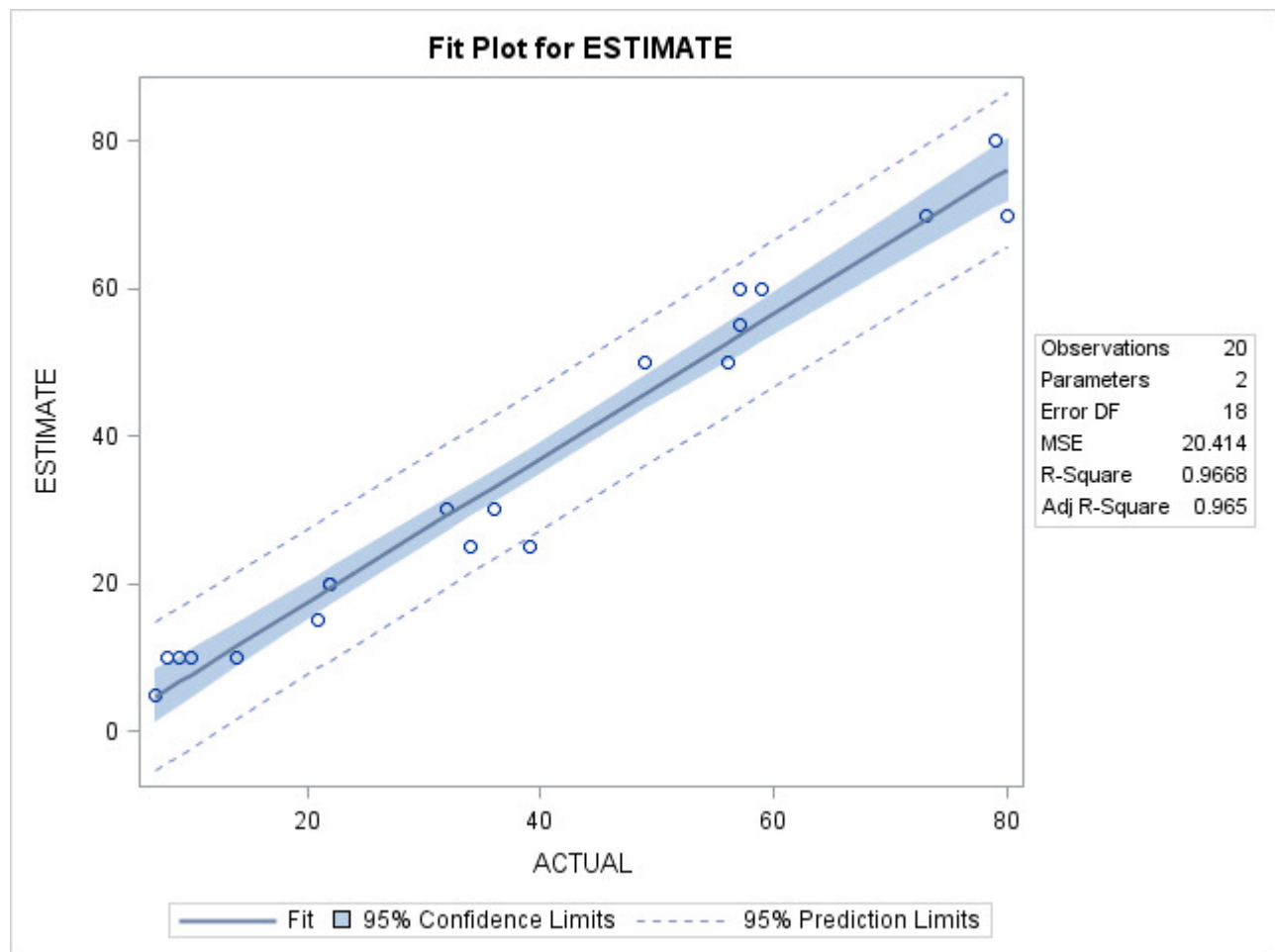
The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: DIFF

TEST=POST1

Number of Observations Read	20
Number of Observations Used	20

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	5.50166	5.50166	0.27	0.6100
Error	18	367.44834	20.41380		
Corrected Total	19	372.95000			

Root MSE	4.51816	R-Square	0.0148
Dependent Mean	-2.95000	Adj R-Sq	-0.0400
Coeff Var	-153.15807		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-2.10325	1.91861	-1.10	0.2874
ACTUAL	1	-0.02217	0.04270	-0.52	0.6100

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: DIFF

TEST=POST1

Fit Diagnostics for DIFF

Observations	20
Parameters	2
Error DF	18
MSE	20.414
R-Square	0.0148
Adj R-Square	-0.04

Residuals for DIFF

Fit Plot for DIFF

Observations	20
Parameters	2
Error DF	18
MSE	20.414
R-Square	0.0148
Adj R-Square	-0.04

Fit ☐ 95% Confidence Limits ----- 95% Prediction Limits
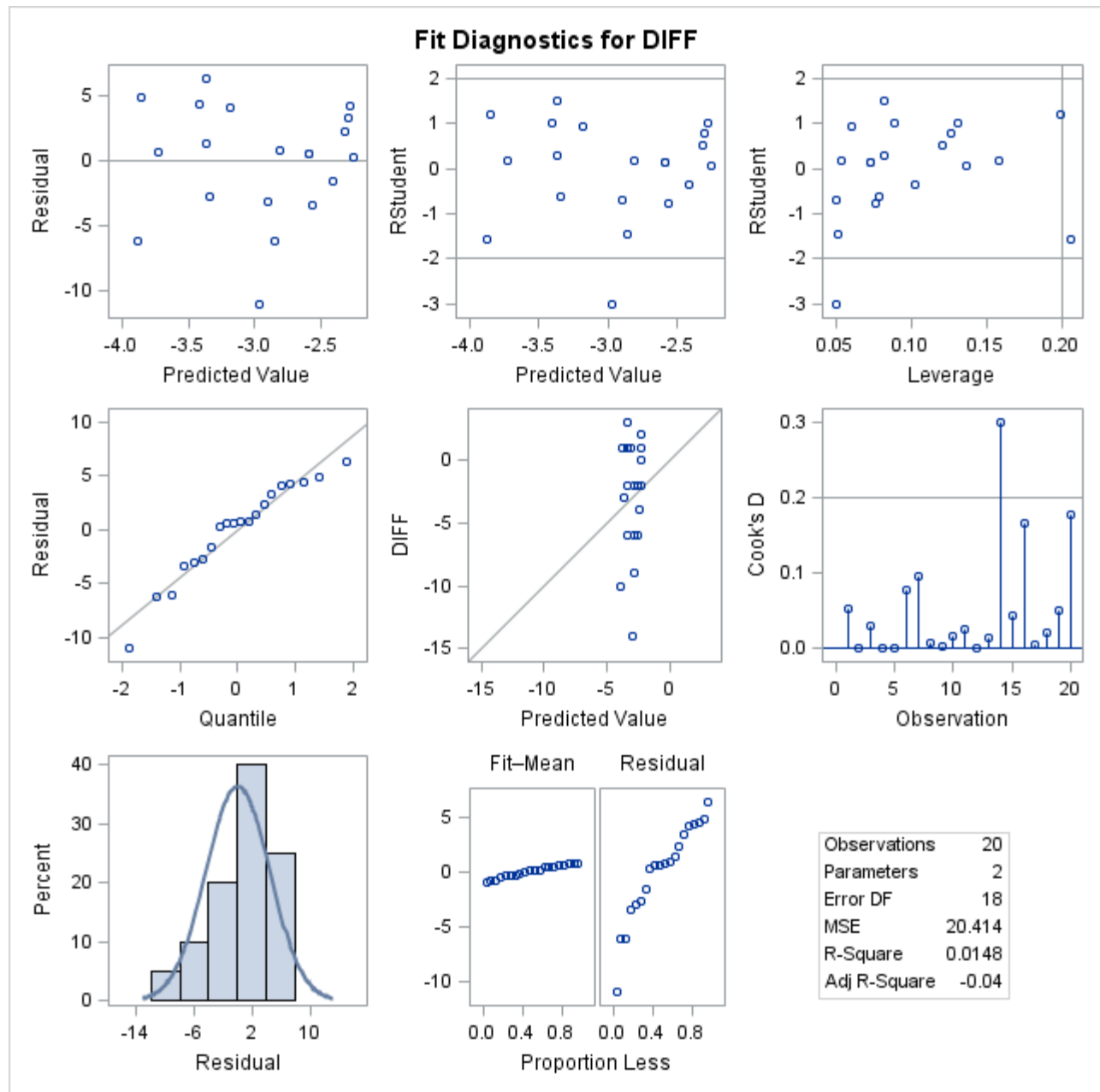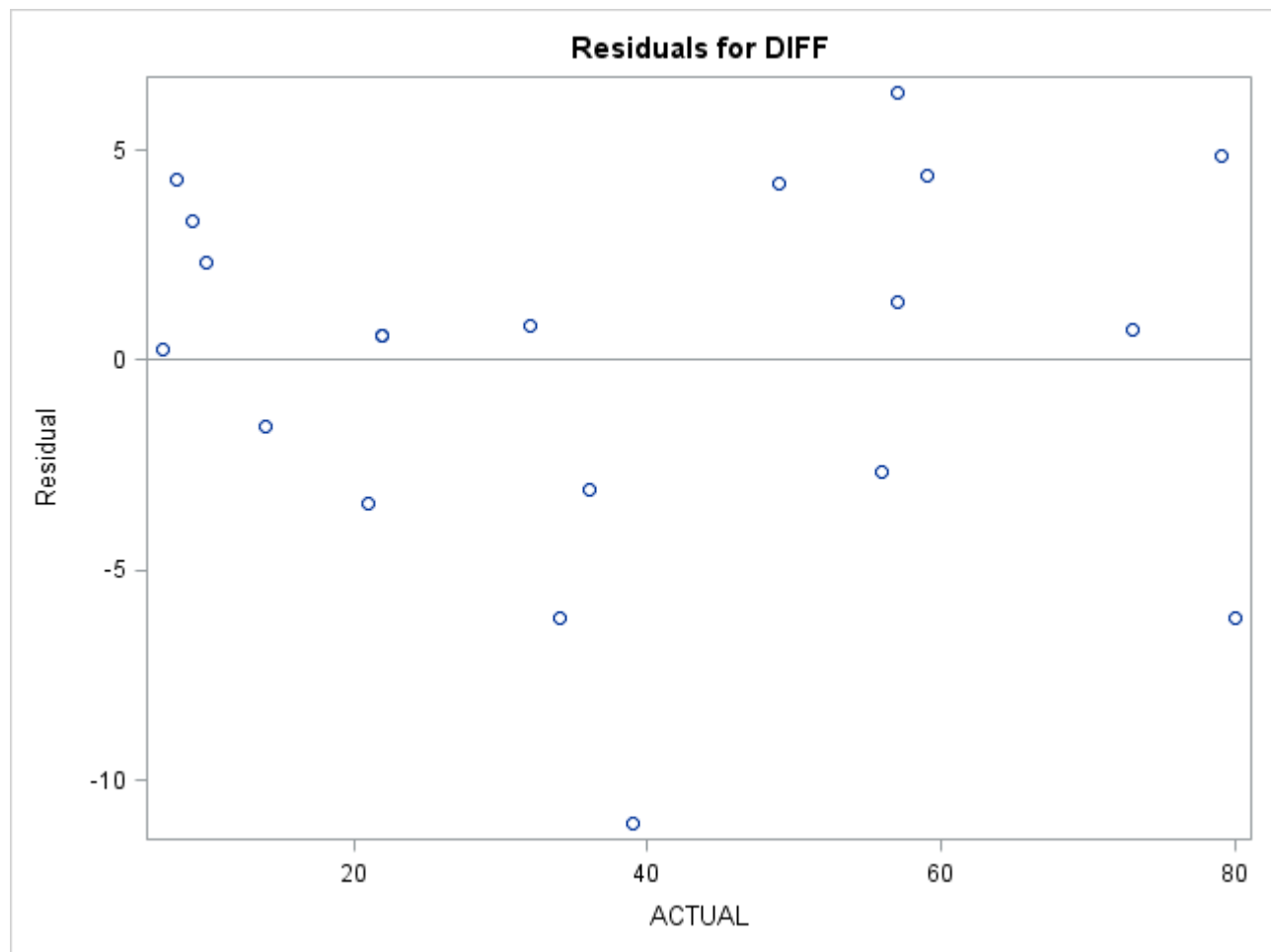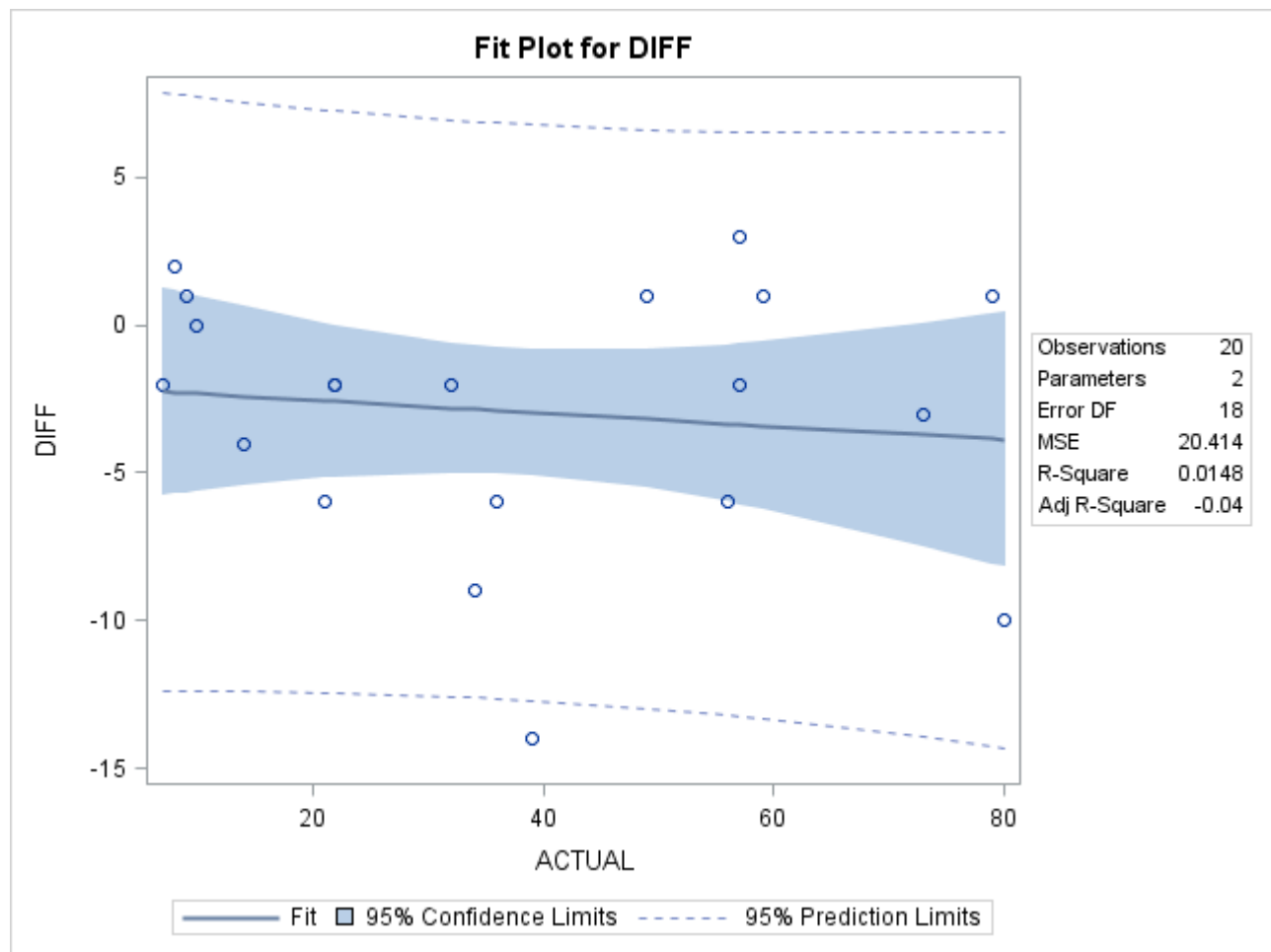
The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: ESTIMATE

TEST=POST2

Number of Observations Read	20
Number of Observations Used	20

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	13060	13060	221.68	<.0001
Error	18	1060.40760	58.91153		
Corrected Total	19	14120			

Root MSE	7.67538	R-Square	0.9249
Dependent Mean	37.00000	Adj R-Sq	0.9207
Coeff Var	20.74428		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-11.40269	3.67614	-3.10	0.0062
ACTUAL	1	1.21768	0.08178	14.89	<.0001

The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: ESTIMATE

TEST=POST2

Fit Diagnostics for ESTIMATE

Observations	20
Parameters	2
Error DF	18
MSE	58.912
R-Square	0.9249
Adj R-Square	0.9207

Residuals for ESTIMATE

Fit Plot for ESTIMATE

Observations	20
Parameters	2
Error DF	18
MSE	58.912
R-Square	0.9249
Adj R-Square	0.9207
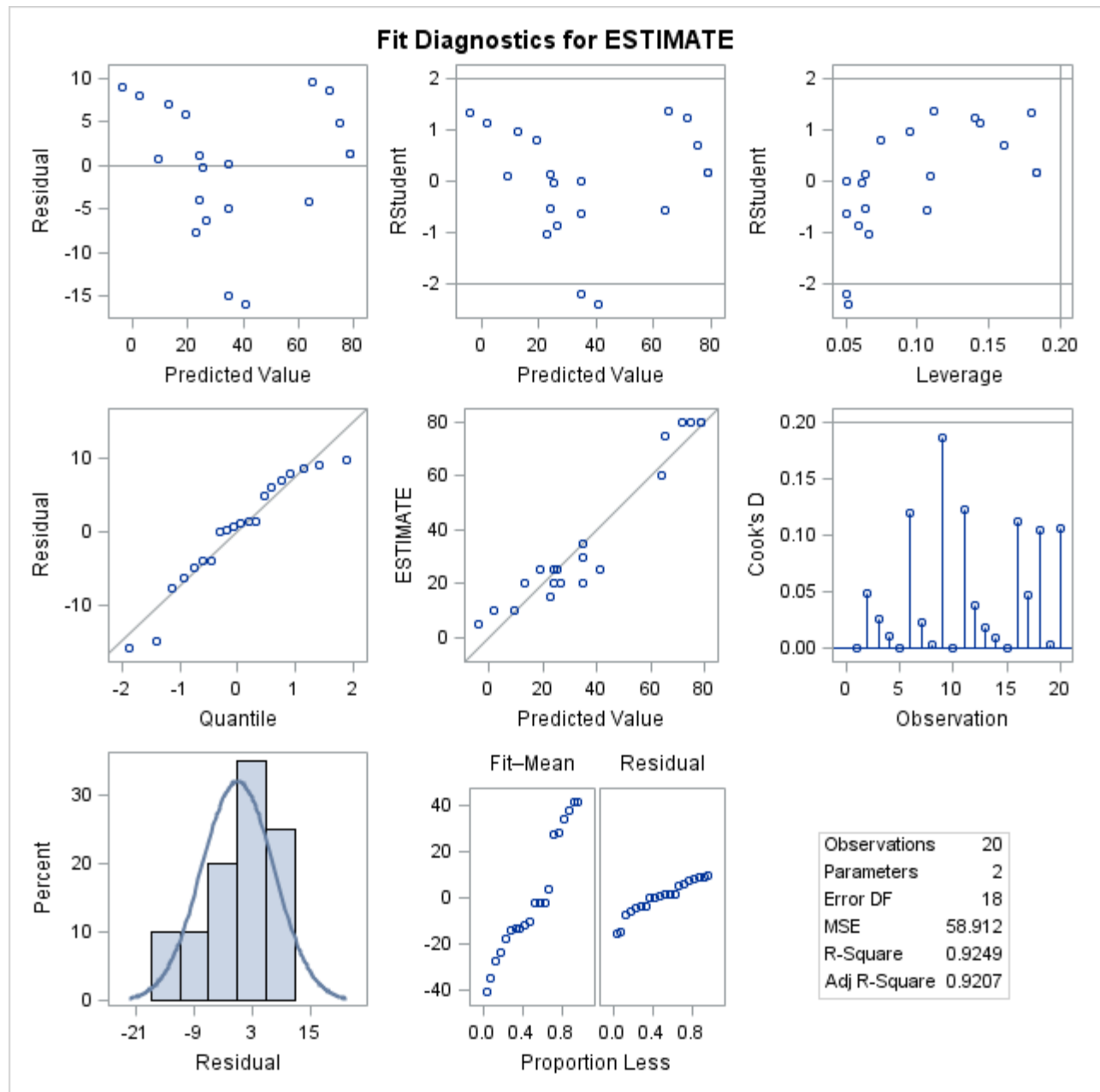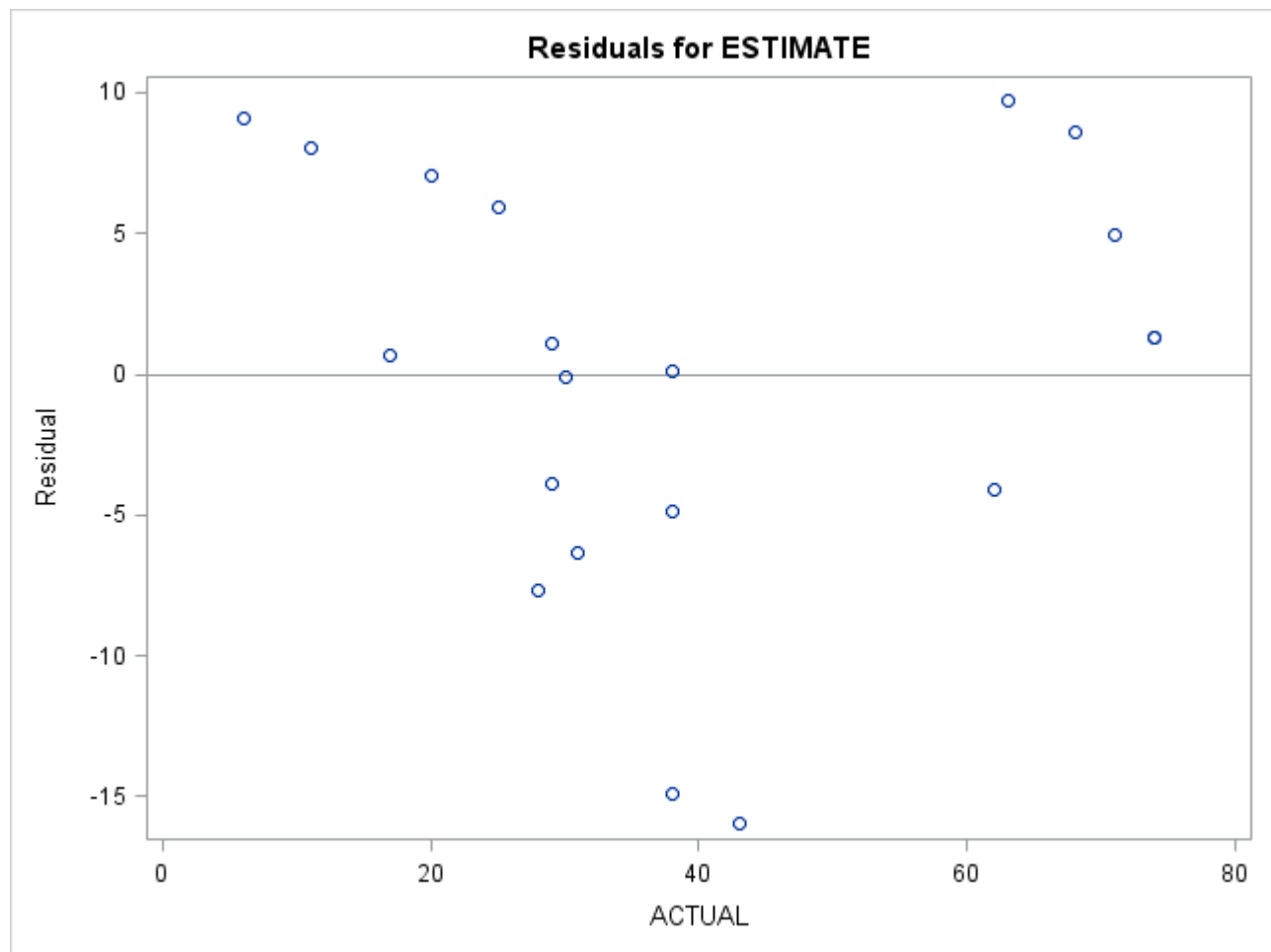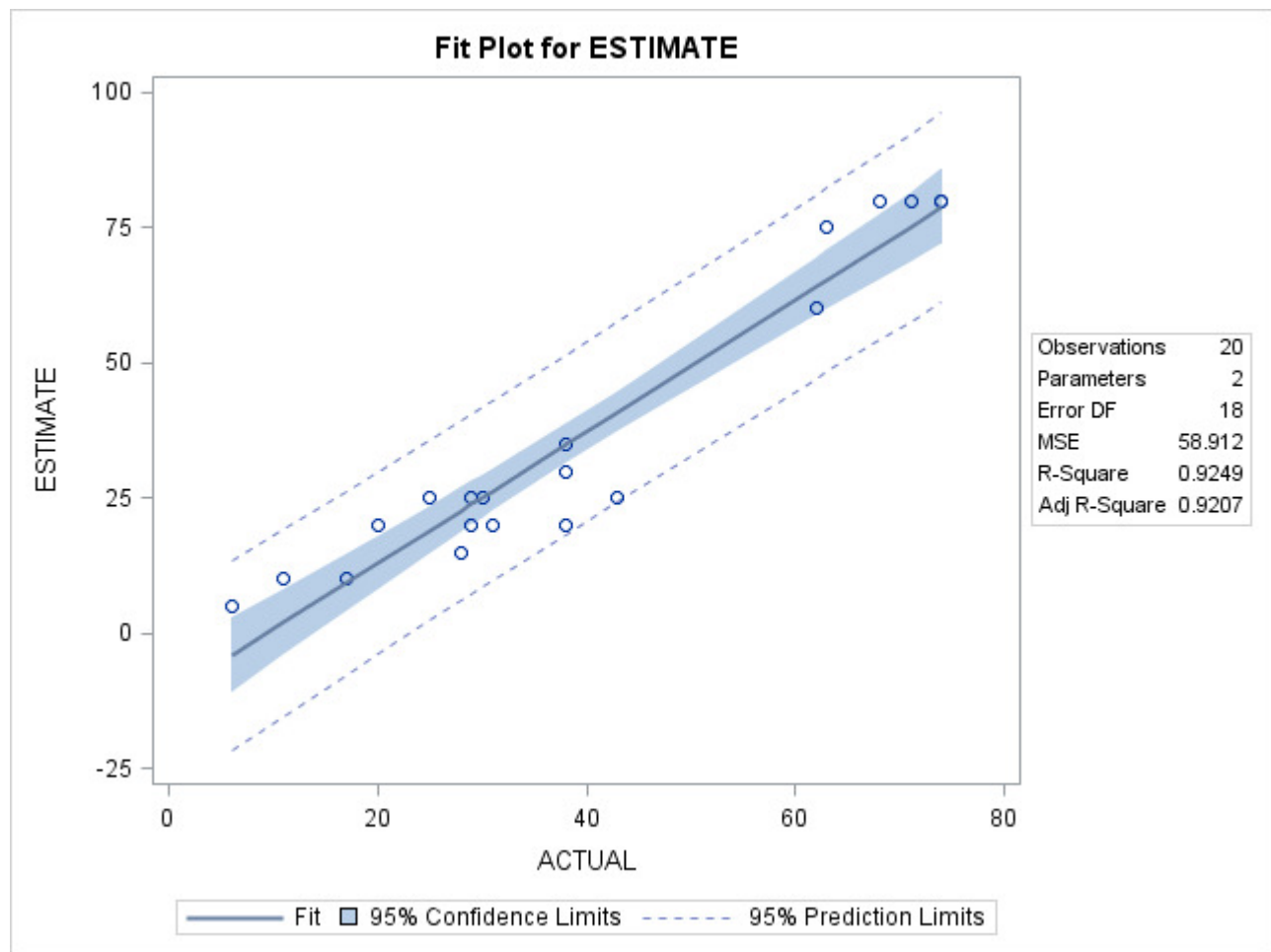
The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: DIFF

TEST=POST2

Number of Observations Read	20
Number of Observations Used	20

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	417.34240	417.34240	7.08	0.0159
Error	18	1060.40760	58.91153		
Corrected Total	19	1477.75000			

Root MSE	7.67538	R-Square	0.2824
Dependent Mean	-2.75000	Adj R-Sq	0.2426
Coeff Var	-279.10490		

Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	-11.40269	3.67614	-3.10	0.0062
ACTUAL	1	0.21768	0.08178	2.66	0.0159

The SAS System

The REG Procedure
Model: MODEL2
Dependent Variable: DIFF

TEST=POST2

Fit Diagnostics for DIFF

Observations	20
Parameters	2
Error DF	18
MSE	58.912
R-Square	0.2824
Adj R-Square	0.2426

Residuals for DIFF

Fit Plot for DIFF

Observations	20
Parameters	2
Error DF	18
MSE	58.912
R-Square	0.2824
Adj R-Square	0.2426