Original Data

Obs	Size	Height	Sex
1	6.5	66.0	F
2	9.0	68.0	F
3	8.5	64.5	F
4	8.5	65.0	F
5	10.5	70.0	M
6	7.0	64.0	F
7	9.5	70.0	F
8	9.0	71.0	F
9	13.0	72.0	M
10	7.5	64.0	F
11	10.5	74.5	M
12	8.5	67.0	F
13	12.0	71.0	M
14	10.5	71.0	M
15	13.0	77.0	M
16	11.5	72.0	M
17	8.5	59.0	F
18	5.0	62.0	F
19	10.0	72.0	M
20	6.5	66.0	F
21	7.5	64.0	F
22	8.5	67.0	M
23	10.5	73.0	M
24	8.5	69.0	F
25	10.5	72.0	M
26	11.0	70.0	M
27	9.0	69.0	M
28	13.0	70.0	M

Mens Data

Obs	Size	Height	Sex
1	10.5	70.0	M
2	13.0	72.0	M
3	10.5	74.5	M
4	12.0	71.0	M
5	10.5	71.0	M
6	13.0	77.0	M
7	11.5	72.0	M
8	10.0	72.0	M
9	8.5	67.0	M
10	10.5	73.0	M
11	10.5	72.0	M
12	11.0	70.0	M
13	9.0	69.0	M
14	13.0	70.0	M

Females Data

Obs	Size	Height	Sex
1	6.5	66.0	F
2	9.0	68.0	F
3	8.5	64.5	F
4	8.5	65.0	F
5	7.0	64.0	F
6	9.5	70.0	F
7	9.0	71.0	F
8	7.5	64.0	F
9	8.5	67.0	F
10	8.5	59.0	F
11	5.0	62.0	F
12	6.5	66.0	F
13	7.5	64.0	F
14	8.5	69.0	F

Mens Regression Line

The REG Procedure
Model: MODEL1
Dependent Variable: Height

Number of Observations Read	14
Number of Observations Used	14

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	20.52604	20.52604	4.42	0.0573
Error	12	55.70611	4.64218		
Corrected Total	13	76.23214			

Root MSE	2.15457	R-Square	0.2693
Dependent Mean	71.46429	Adj R-Sq	0.2084
Coeff Var	3.01489		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	61.67176	4.69243	13.14	<.0001
Size	1	0.89313	0.42474	2.10	0.0573

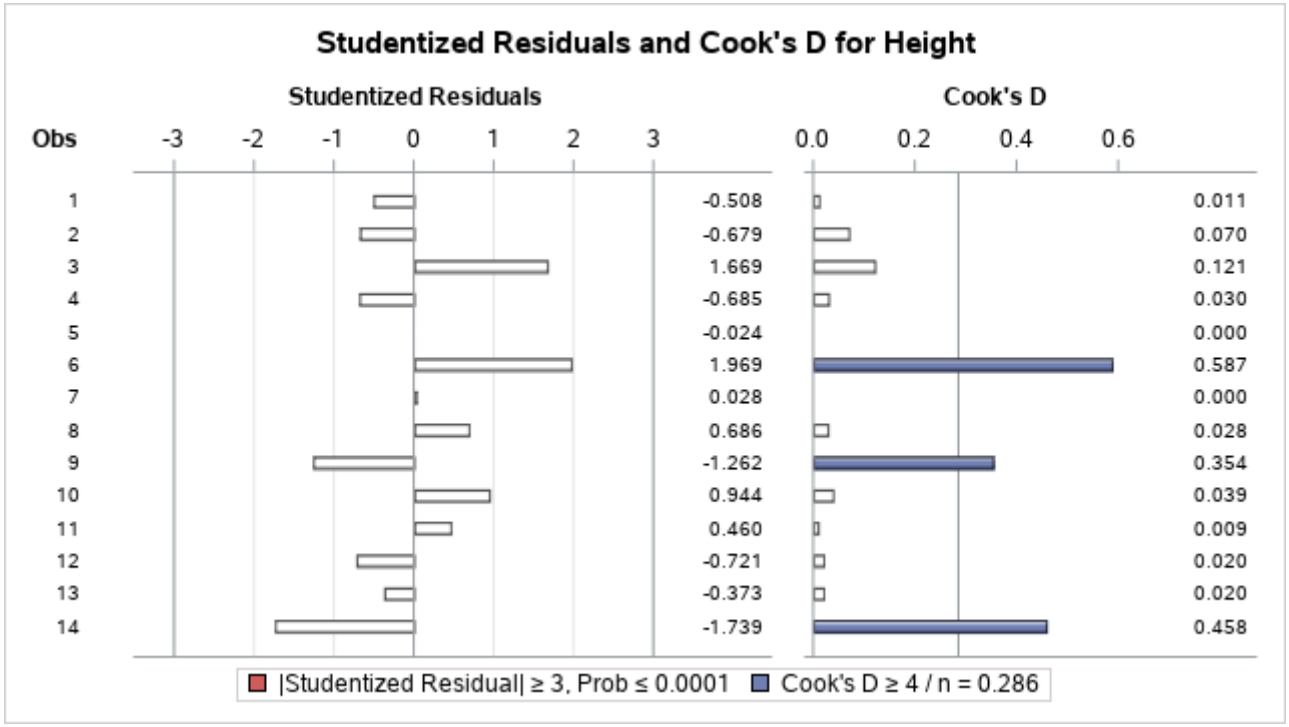
$$\hat{y} = 61.67176 + 0.89313x$$

Mens Regression Line

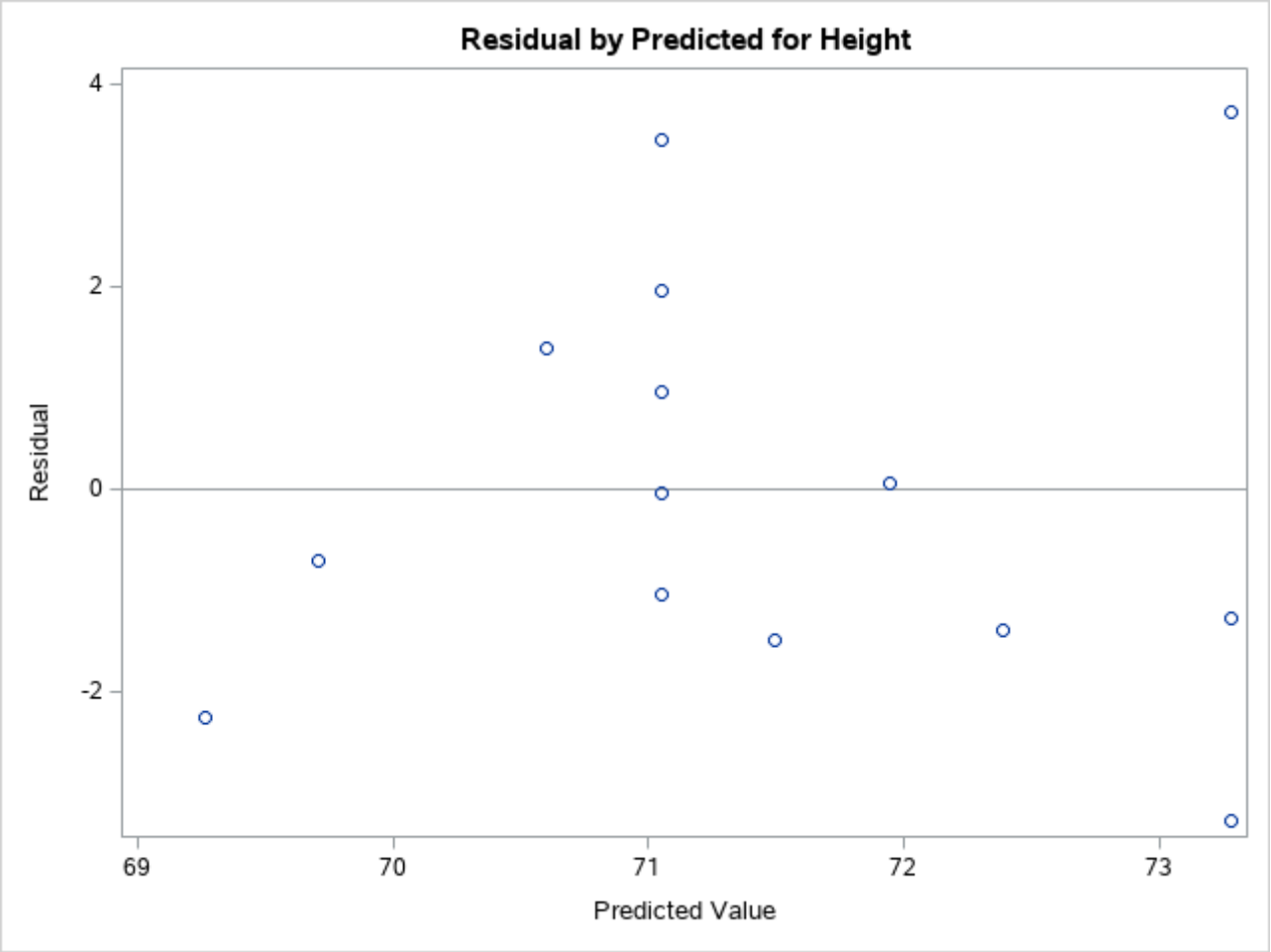
The REG Procedure
Model: MODEL1
Dependent Variable: Height

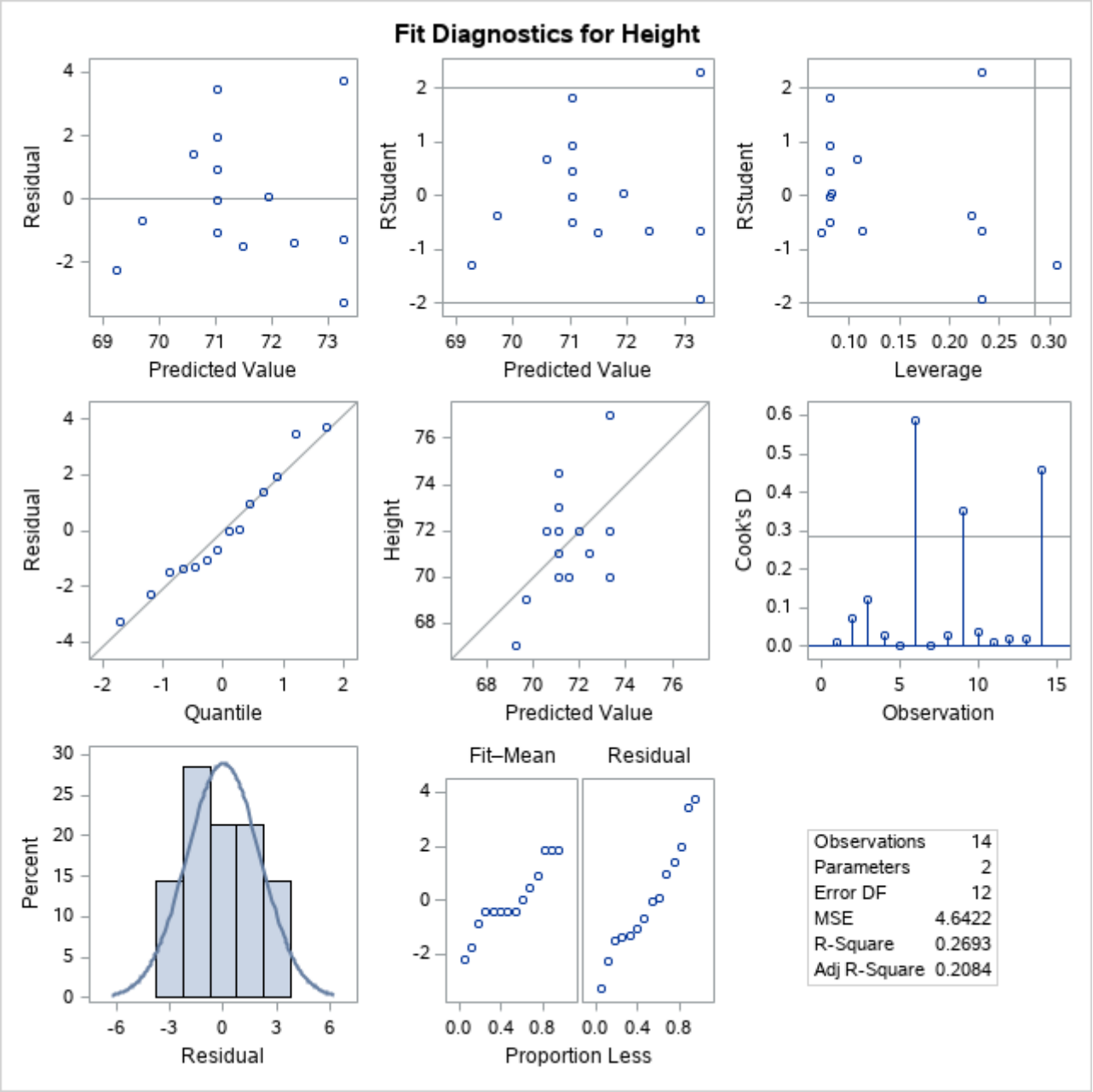
Output Statistics

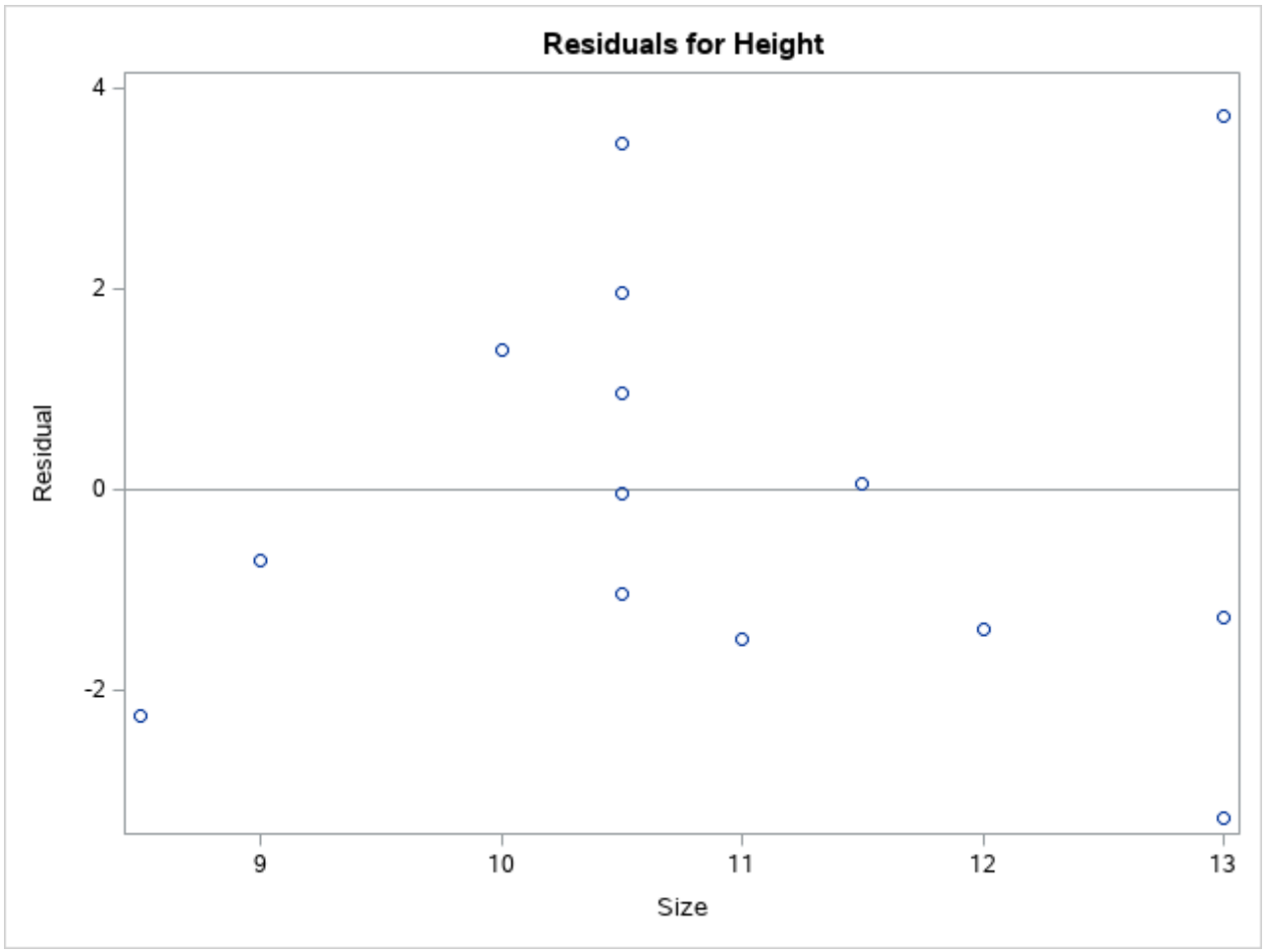
			Std	Output Statistics							
Obs	Dependent Variable	Predicted Value	Error Mean Predict	95% CL Mean		95% CL Predict		Residual	Std Error Residual	Student Residual	Cook's D
Obs	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		95% CL Predict		Residual	Std Error Residual	Student Residual	Cook's D
1	70.0	71.0496	0.6087	69.7235	72.3758	66.1715	75.9277	-1.0496	2.067	-0.508	0.011
2	72.0	73.2824	1.0388	71.0190	75.5459	68.0709	78.4940	-1.2824	1.888	-0.679	0.070
3	74.5	71.0496	0.6087	69.7235	72.3758	66.1715	75.9277	3.4504	2.067	1.669	0.121
4	71.0	72.3893	0.7246	70.8105	73.9682	67.4365	77.3421	-1.3893	2.029	-0.685	0.030
5	71.0	71.0496	0.6087	69.7235	72.3758	66.1715	75.9277	-0.0496	2.067	-0.024	0.000
6	77.0	73.2824	1.0388	71.0190	75.5459	68.0709	78.4940	3.7176	1.888	1.969	0.587
7	72.0	71.9427	0.6192	70.5937	73.2918	67.0584	76.8271	0.0573	2.064	0.028	0.000
8	72.0	70.6031	0.7066	69.0634	72.1427	65.6626	75.5435	1.3969	2.035	0.686	0.028
9	67.0	69.2634	1.1946	66.6605	71.8662	63.8956	74.6311	-2.2634	1.793	-1.262	0.354
10	73.0	71.0496	0.6087	69.7235	72.3758	66.1715	75.9277	1.9504	2.067	0.944	0.039
11	72.0	71.0496	0.6087	69.7235	72.3758	66.1715	75.9277	0.9504	2.067	0.460	0.009
12	70.0	71.4962	0.5760	70.2411	72.7513	66.6369	76.3555	-1.4962	2.076	-0.721	0.020
13	69.0	69.7099	1.0137	67.5012	71.9187	64.5219	74.8980	-0.7099	1.901	-0.373	0.020
14	70.0	73.2824	1.0388	71.0190	75.5459	68.0709	78.4940	-3.2824	1.888	-1.739	0.458

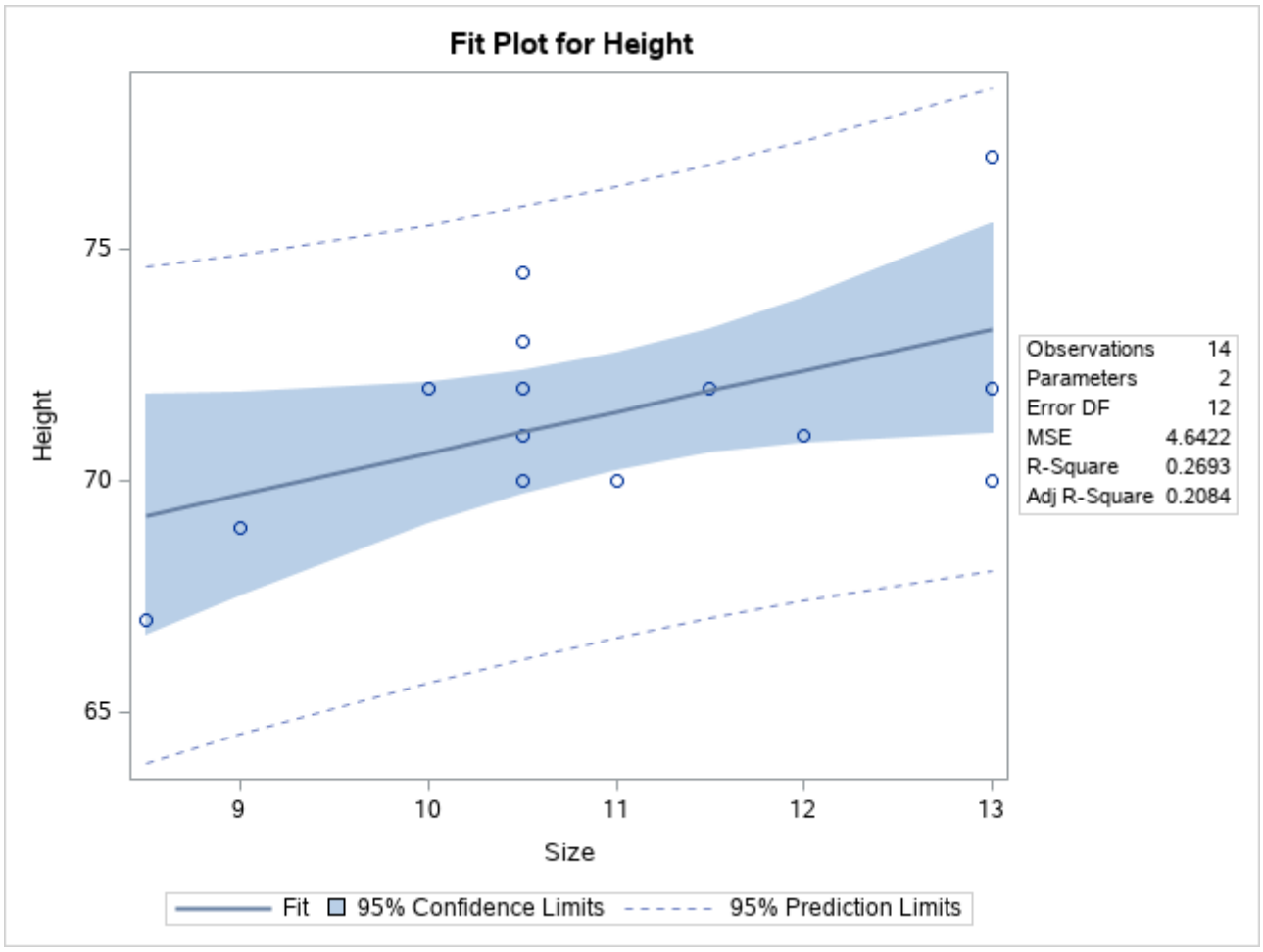


Sum of Residuals	0
Sum of Squared Residuals	55.70611
Predicted Residual SS (PRESS)	84.48075


Residual by Predicted for Height
Residual
4
2
0
-2
69
70
71
72
73
Predicted Value


Fit Diagnostics for Height
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
Height
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 14
Parameters 2
Error DF 12
MSE 4.6422
R-Square 0.2693
Adj R-Square 0.2084


Residuals for Height
Residual
4
2
0
-2
9
10
11
12
13
Size


Fit Plot for Height
Height
75
70
65
9
10
11
12
13
Size
Observations 14
Parameters 2
Error DF 12
MSE 4.6422
R-Square 0.2693
Adj R-Square 0.2084
Fit
95% Confidence Limits
95% Prediction Limits

$\hat{y} = 61.67176 + 0.89313x$

Correlation between Height and Size

The CORR Procedure

2 Variables:	Size Height

Simple Statistics						
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
Size	14	10.96429	1.40691	153.50000	8.50000	13.00000
Height	14	71.46429	2.42157	1001	67.00000	77.00000

Pearson Correlation Coefficients, N = 14 Prob > |r| under H0: Rho=0		
	Size	Height
Size	1.00000	0.51890 0.0573
Height	0.51890 0.0573	1.00000

Pearson Correlation Statistics (Fisher's z Transformation)									
Variable	With Variable	N	Sample Correlation	Fisher's z	Bias Adjustment	Correlation Estimate	95% Confidence Limits		p Value for H0:Rho=0
Size	Height	14	0.51890	0.57483	0.01996	0.50417	-0.036060	0.816367	0.0566

$\hat{y} = 61.67176 + 0.89313x$

Womens Regression Line

The REG Procedure
Model: MODEL1
Dependent Variable: Height

Number of Observations Read	14
Number of Observations Used	14

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	32.43873	32.43873	3.84	0.0737
Error	12	101.36484	8.44707		
Corrected Total	13	133.80357			

Root MSE	2.90638	R-Square	0.2424
Dependent Mean	65.67857	Adj R-Sq	0.1793
Coeff Var	4.42516		

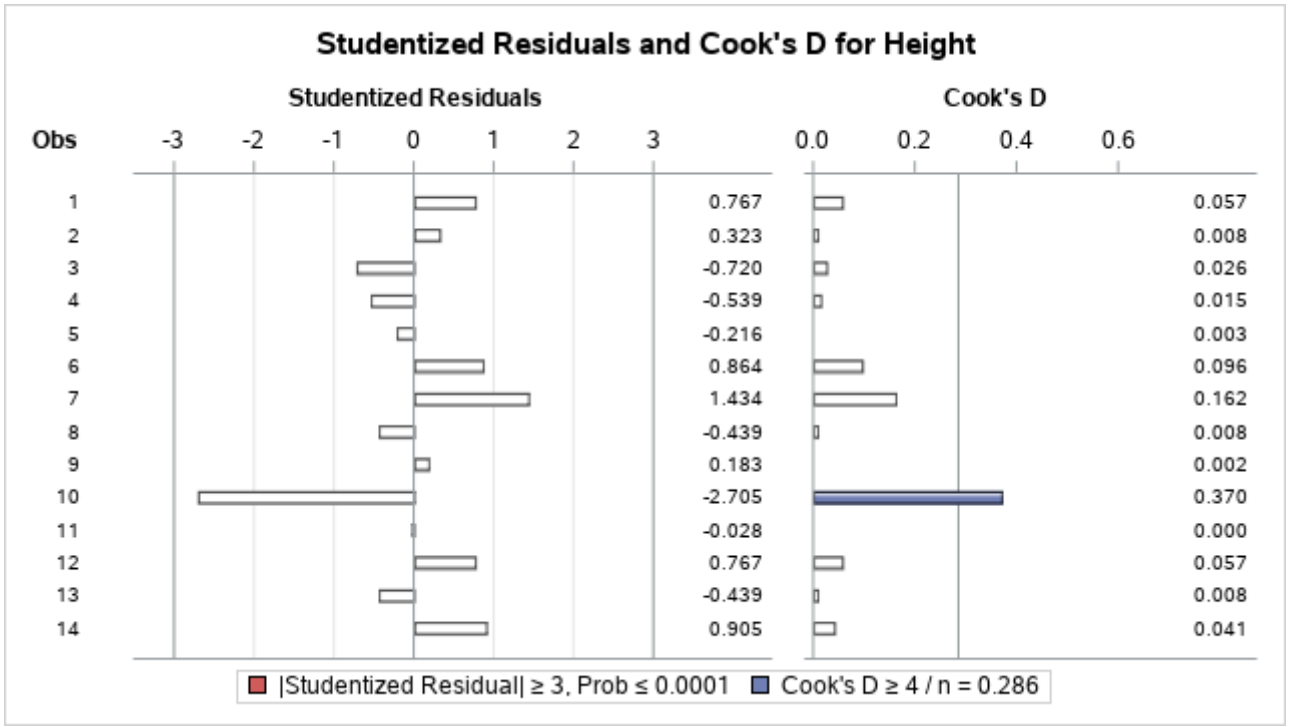
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	55.72527	5.13817	10.85	<.0001
Size	1	1.26678	0.64643	1.96	0.0737

$\hat{y} = 55.725 + 1.267x$

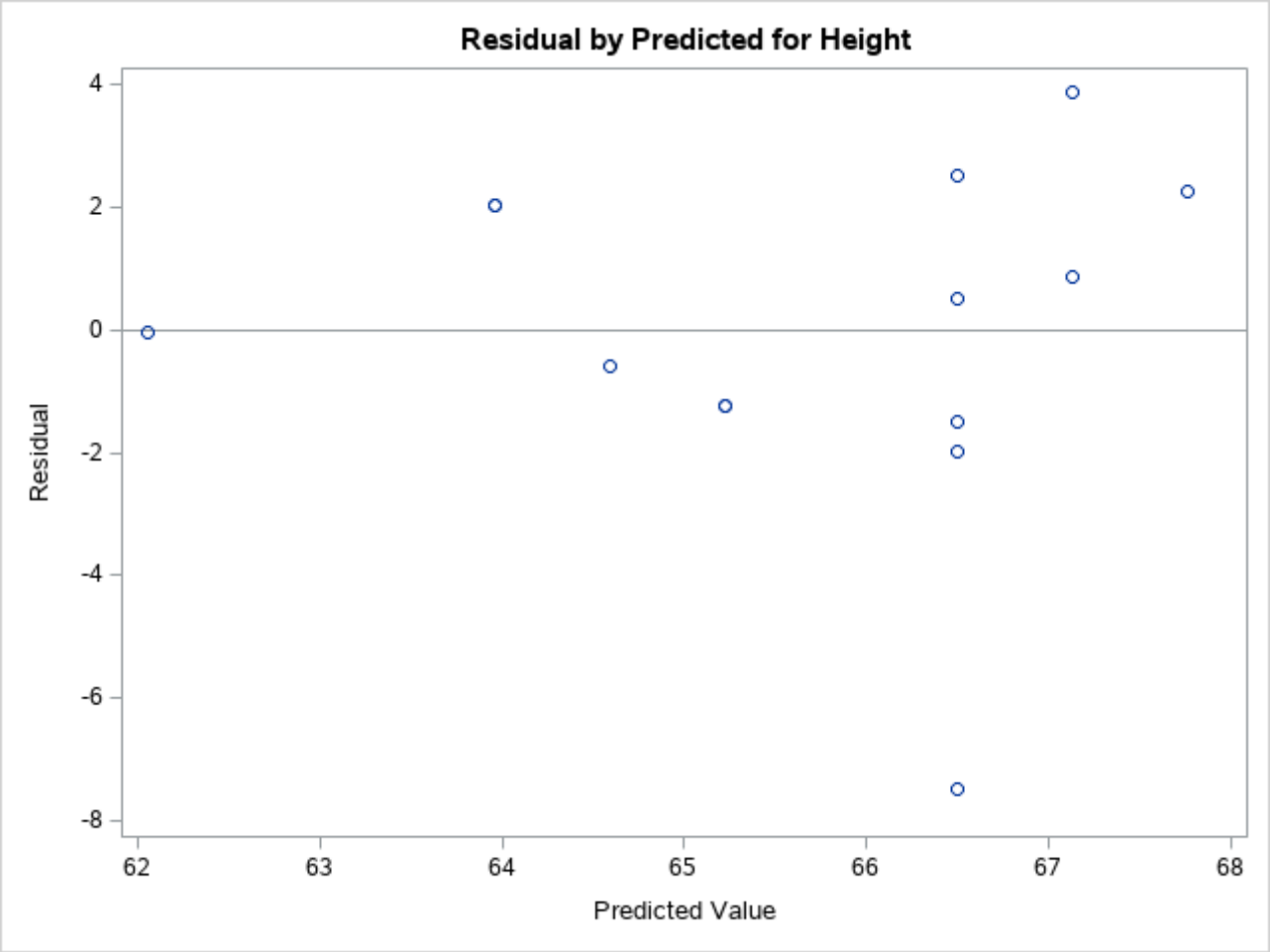
Womens Regression Line

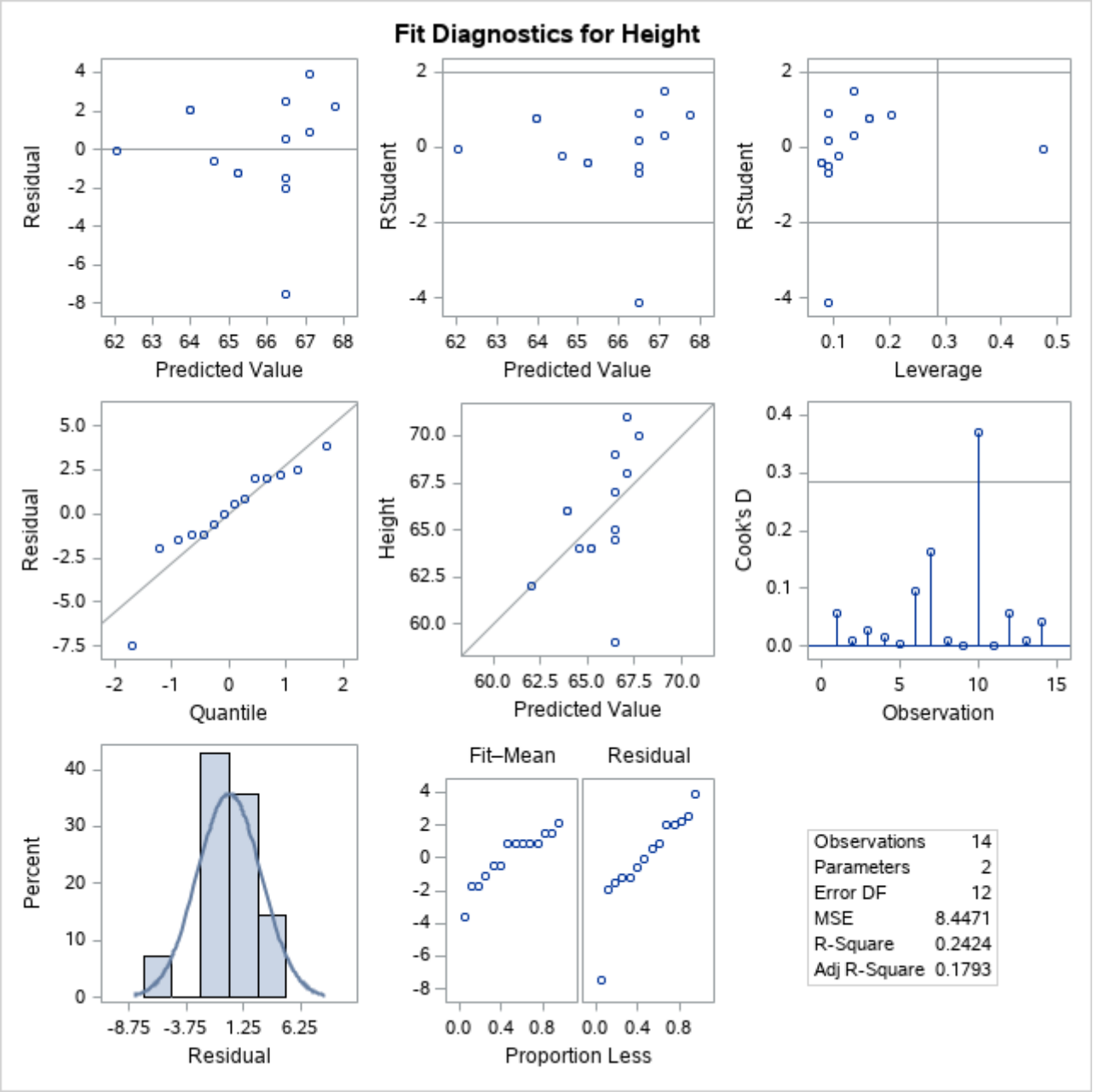
The REG Procedure
Model: MODEL1
Dependent Variable: Height

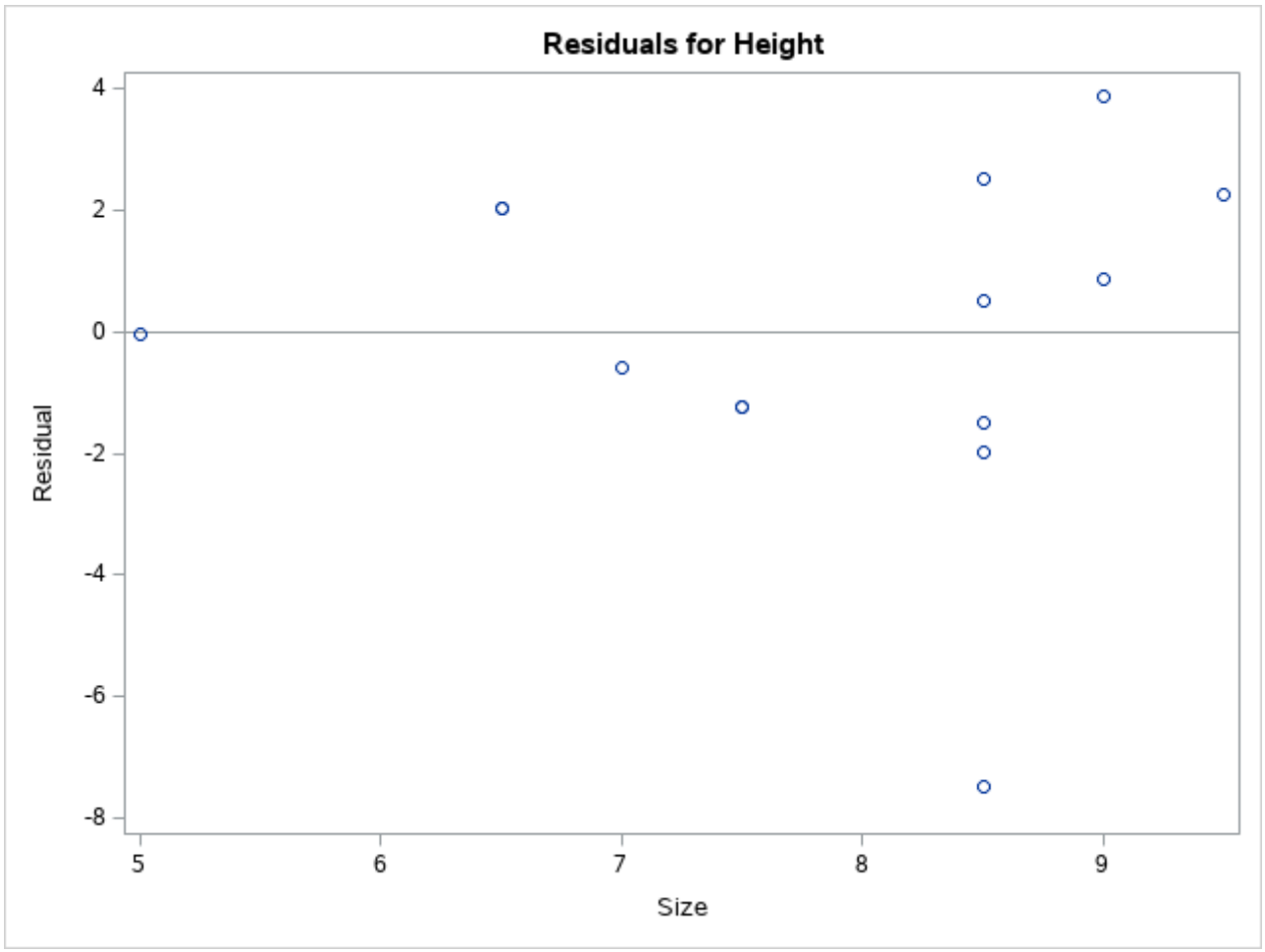
Output Statistics											
Obs	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		95% CL Predict		Residual	Std Error Residual	Student Residual	Cook's D
1	66.0	63.9594	1.1718	61.4063	66.5124	57.1316	70.7871	2.0406	2.660	0.767	0.057
2	68.0	67.1263	1.0720	64.7907	69.4620	60.3768	73.8758	0.8737	2.701	0.323	0.008
3	64.5	66.4929	0.8809	64.5735	68.4123	59.8760	73.1099	-1.9929	2.770	-0.720	0.026
4	65.0	66.4929	0.8809	64.5735	68.4123	59.8760	73.1099	-1.4929	2.770	-0.539	0.015
5	64.0	64.5928	0.9541	62.5139	66.6716	57.9278	71.2577	-0.5928	2.745	-0.216	0.003
6	70.0	67.7597	1.3158	64.8929	70.6265	60.8086	74.7109	2.2403	2.591	0.864	0.096
7	71.0	67.1263	1.0720	64.7907	69.4620	60.3768	73.8758	3.8737	2.701	1.434	0.162
8	64.0	65.2261	0.8103	63.4606	66.9917	58.6521	71.8001	-1.2261	2.791	-0.439	0.008
9	67.0	66.4929	0.8809	64.5735	68.4123	59.8760	73.1099	0.5071	2.770	0.183	0.002
10	59.0	66.4929	0.8809	64.5735	68.4123	59.8760	73.1099	-7.4929	2.770	-2.705	0.370
11	62.0	62.0592	2.0036	57.6936	66.4248	54.3677	69.7506	-0.0592	2.105	-0.028	0.000
12	66.0	63.9594	1.1718	61.4063	66.5124	57.1316	70.7871	2.0406	2.660	0.767	0.057
13	64.0	65.2261	0.8103	63.4606	66.9917	58.6521	71.8001	-1.2261	2.791	-0.439	0.008
14	69.0	66.4929	0.8809	64.5735	68.4123	59.8760	73.1099	2.5071	2.770	0.905	0.041

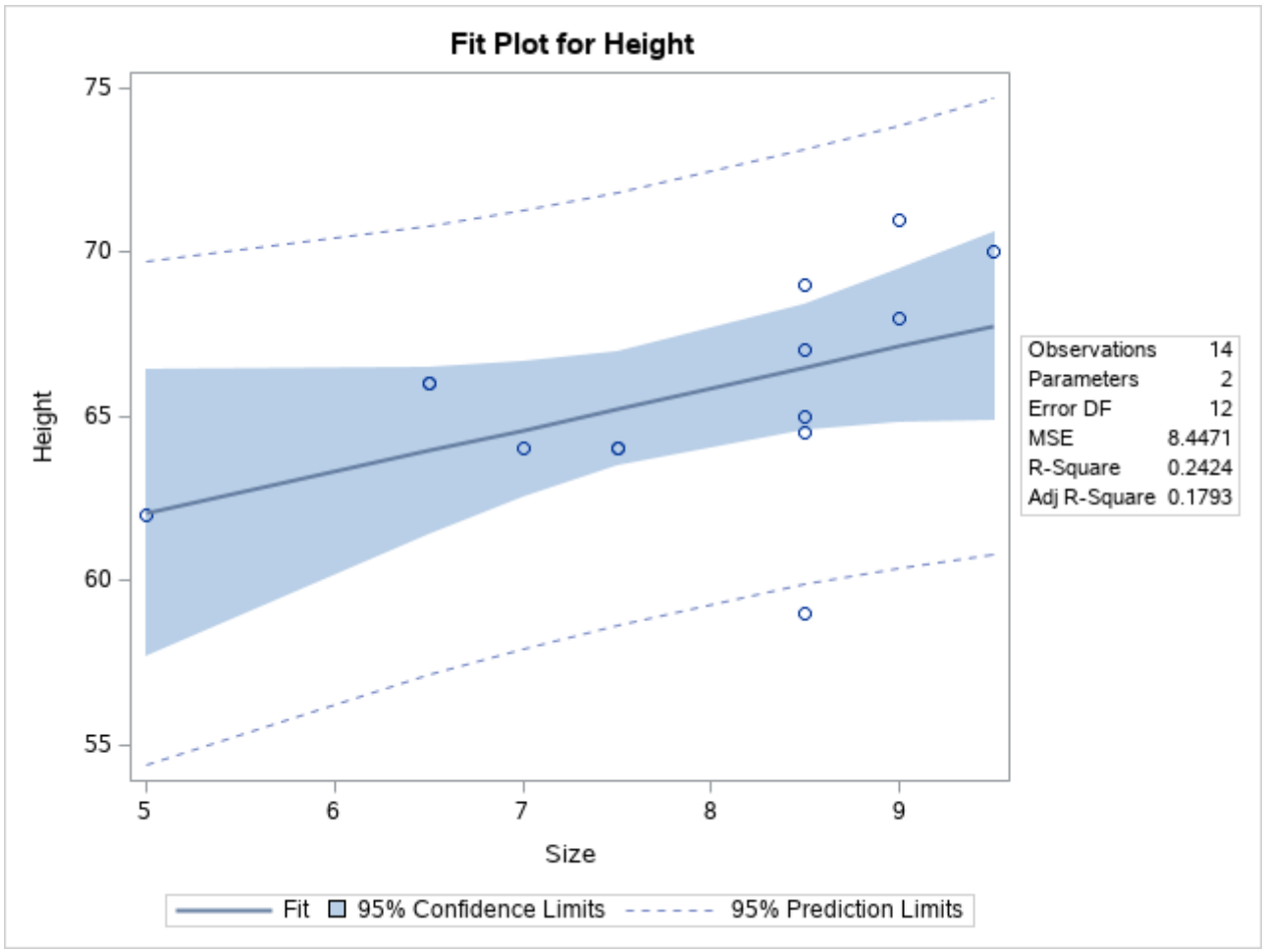


Sum of Residuals	0
Sum of Squared Residuals	101.36484
Predicted Residual SS (PRESS)	128.46035


Residual by Predicted for Height
Residual
Predicted Value
4
2
0
-2
-4
-6
-8
62
63
64
65
66
67
68


Fit Diagnostics for Height
Residual
Predicted Value
RStudent
Predicted Value
RStudent
Leverage
Residual
Quantile
Height
Predicted Value
Cook's D
Observation
Percent
Residual
Fit–Mean
Residual
Proportion Less
Observations 14
Parameters 2
Error DF 12
MSE 8.4471
R-Square 0.2424
Adj R-Square 0.1793


Residuals for Height
Residual
Size
4
2
0
-2
-4
-6
-8
5
6
7
8
9


Fit Plot for Height
Height
Size
75
70
65
60
55
5
6
7
8
9
Observations 14
Parameters 2
Error DF 12
MSE 8.4471
R-Square 0.2424
Adj R-Square 0.1793
Fit
95% Confidence Limits
95% Prediction Limits

$\hat{y} = 55.725 + 1.267x$

Correlation between Height and Size

The CORR Procedure

2 Variables:	Size Height

Simple Statistics						
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
Size	14	7.85714	1.24697	110.00000	5.00000	9.50000
Height	14	65.67857	3.20821	919.50000	59.00000	71.00000

Pearson Correlation Coefficients, N = 14 Prob > |r| under H0: Rho=0		
	Size	Height
Size	1.00000	0.49238 0.0737
Height	0.49238 0.0737	1.00000

Pearson Correlation Statistics (Fisher's z Transformation)									
Variable	With Variable	N	Sample Correlation	Fisher's z	Bias Adjustment	Correlation Estimate	95% Confidence Limits		p Value for H0:Rho=0
Size	Height	14	0.49238	0.53919	0.01894	0.47790	-0.070578	0.804489	0.0737

$\hat{y} = 55.725 + 1.267x$