The REG Procedure
Model: MODEL1
Dependent Variable: Y

Number of Observations Read	16
Number of Observations Used	16

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	196.87813	196.87813	50.71	<.0001
Error	14	54.35625	3.88259		
Corrected Total	15	251.23438			

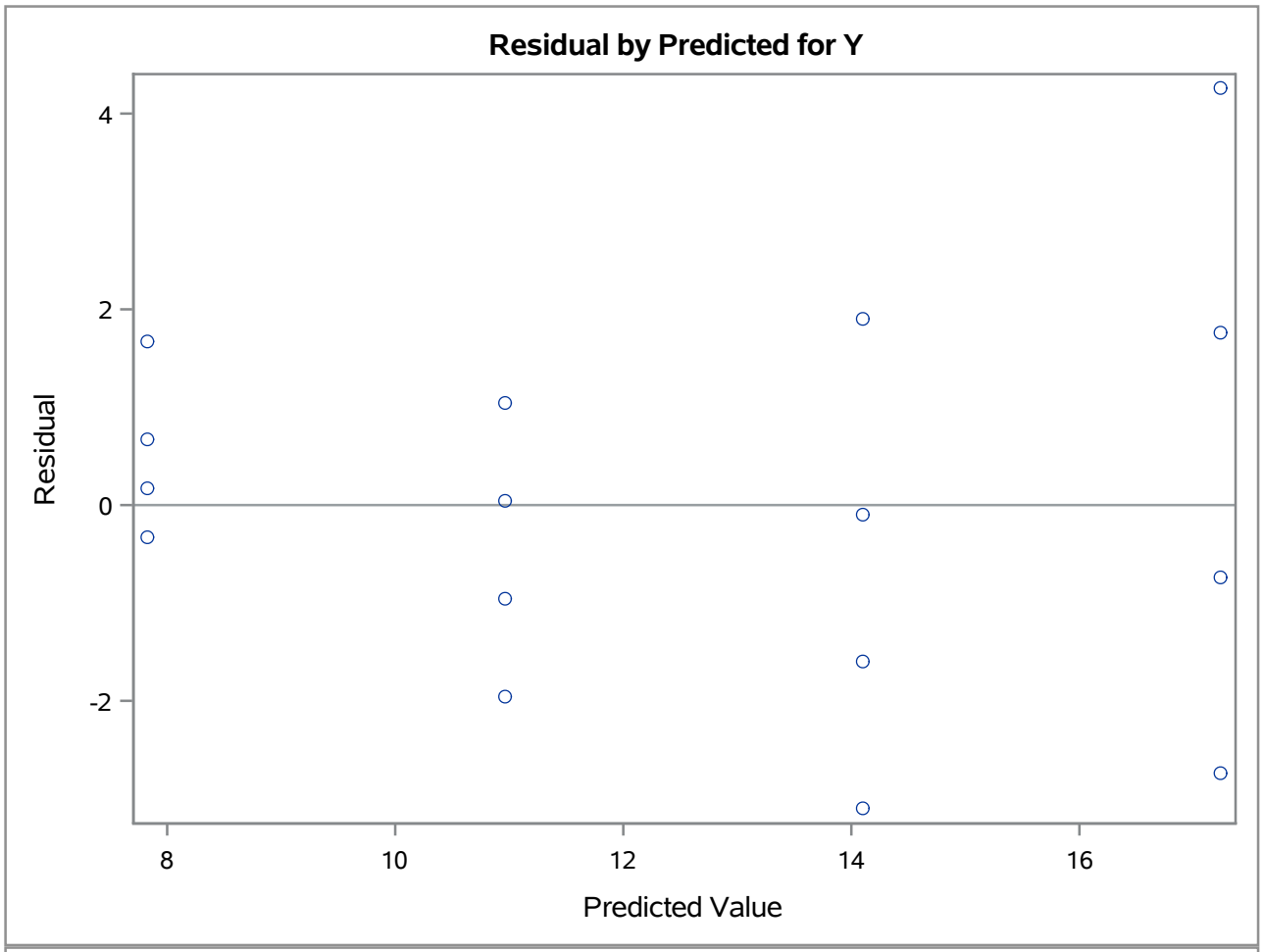
Root MSE	1.97043	R-Square	0.7836
Dependent Mean	12.53125	Adj R-Sq	0.7682
Coeff Var	15.72412		

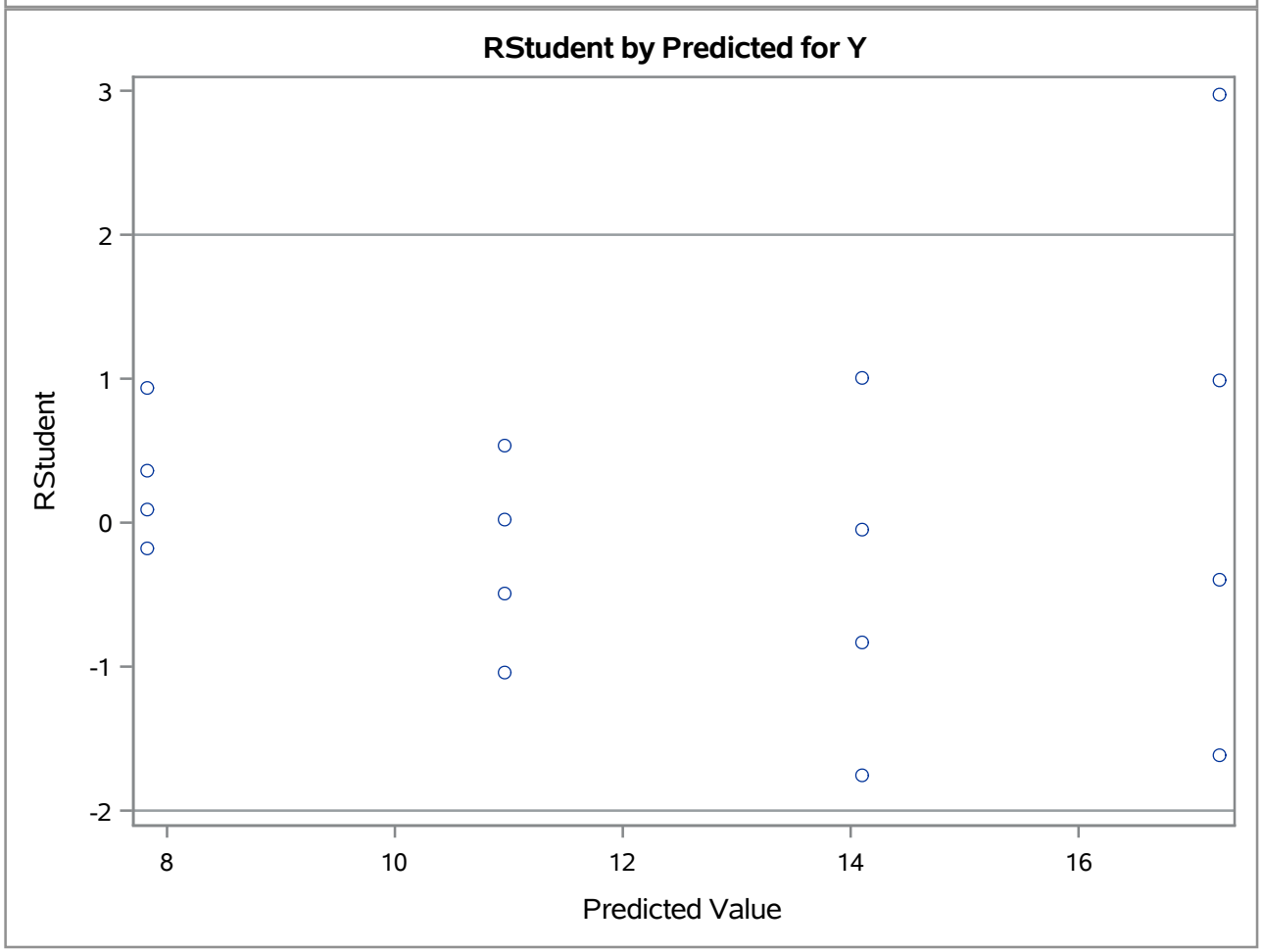
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	4.68750	1.20664	3.88	0.0017
X	1	1.25500	0.17624	7.12	<.0001

Obs	X	Y
1	2.5	7.5
2	2.5	9.5
3	2.5	8.0
4	2.5	8.5
5	5.0	11.0
6	5.0	12.0
7	5.0	9.0
8	5.0	10.0
9	7.5	11.0
10	7.5	16.0
11	7.5	12.5
12	7.5	14.0
13	10.0	16.5
14	10.0	14.5
15	10.0	21.5
16	10.0	19.0

```
ods graphics on;
proc reg data=wls plots=all;
  model Y=X / p r influence;
run;
/* Compute variance estimates of dependent variable Y for each value of X */
proc sql;
create table three as
select *,
    1/var(y) as invVar
from wls
group by x;
quit;
proc print data=three;
run;
/* Weighted regression */
proc reg data=three plots=all;
  model Y=X / p r influence;
  weight invVar;
run;
ods graphics off;run;
quit;
ods pdf close;
run;
```

The REG Procedure
Model: MODEL1





Obs	X	Y	invVar
1	2.5	8.0	1.37143
2	2.5	9.5	1.37143
3	2.5	7.5	1.37143
4	2.5	8.5	1.37143
5	5.0	9.0	0.60000
6	5.0	12.0	0.60000
7	5.0	11.0	0.60000
8	5.0	10.0	0.60000
9	7.5	14.0	0.21918
10	7.5	12.5	0.21918
11	7.5	16.0	0.21918
12	7.5	11.0	0.21918
13	10.0	21.5	0.10835
14	10.0	14.5	0.10835
15	10.0	16.5	0.10835
16	10.0	19.0	0.10835

The REG Procedure
Model: MODEL1
Dependent Variable: Y

Number of Observations Read	16
Number of Observations Used	16

Weight: invVar

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	50.13331	50.13331	51.53	<.0001
Error	14	13.62088	0.97292		
Corrected Total	15	63.75419			

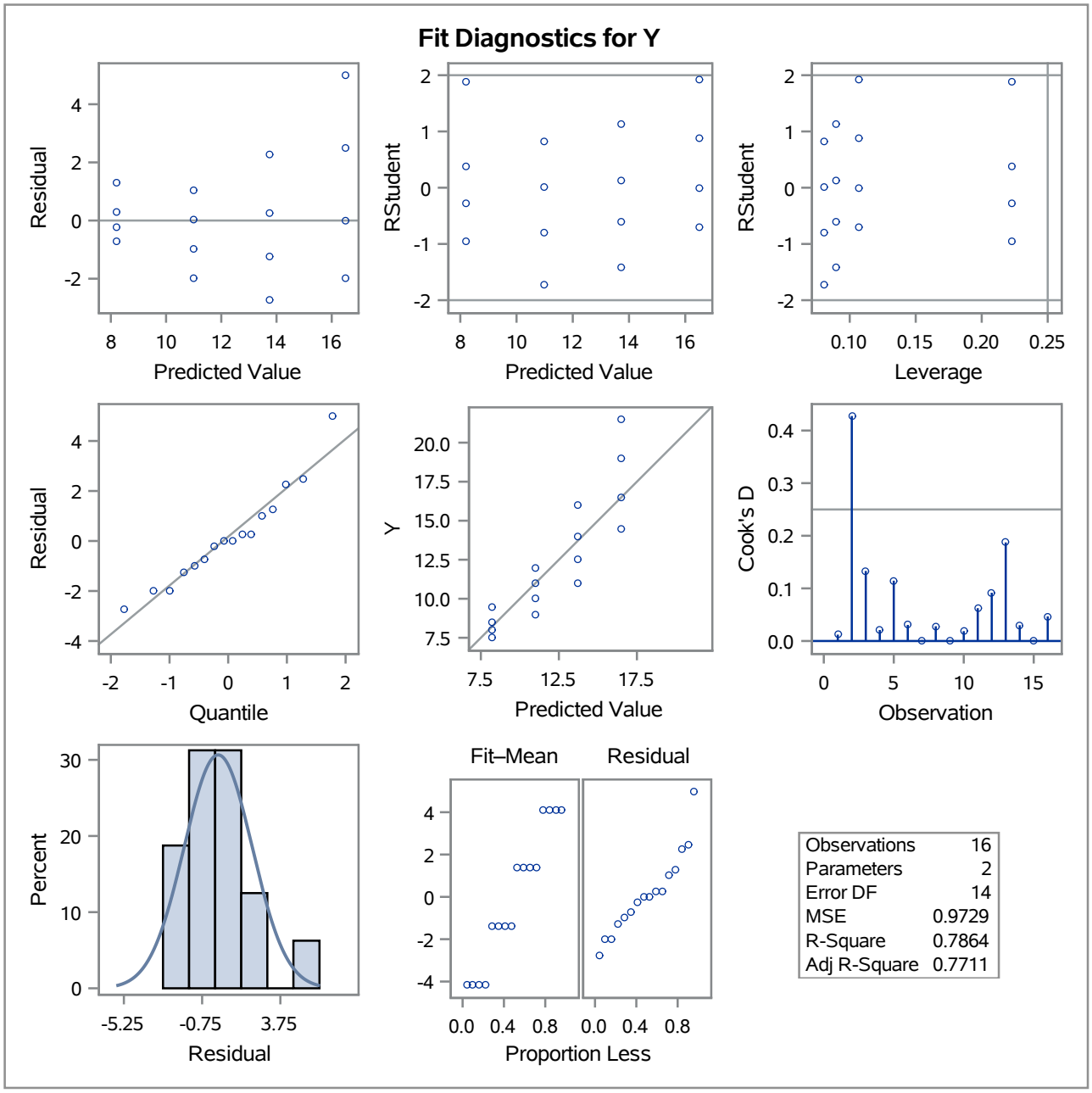
Root MSE	0.98637	R-Square	0.7864
Dependent Mean	9.85403	Adj R-Sq	0.7711
Coeff Var	10.00978		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
Intercept	1	5.45451	0.69385	7.86	<.0001
X	1	1.10468	0.15389	7.18	<.0001

Unweighted analysis

Variable		Estimate	Std Err
Intercept	1	4.68750	1.20664
X	1	1.25500	0.17624

The REG Procedure
Model: MODEL1



The REG Procedure
Model: MODEL1