

### The CONTENTS Procedure

<b>Data Set Name</b>	WORK.TRAIN	<b>Observations</b>	1460
<b>Member Type</b>	DATA	<b>Variables</b>	81
<b>Engine</b>	V9	<b>Indexes</b>	0
<b>Created</b>	04/11/2019 22:16:28	<b>Observation Length</b>	472
<b>Last Modified</b>	04/11/2019 22:16:28	<b>Deleted Observations</b>	0
<b>Protection</b>		<b>Compressed</b>	NO
<b>Data Set Type</b>		<b>Sorted</b>	NO
<b>Label</b>			
<b>Data Representation</b>	SOLARIS_X86_64, LINUX_X86_64, ALPHA_TRU64, LINUX_IA64		
<b>Encoding</b>	utf-8 Unicode (UTF-8)		

Engine/Host Dependent Information	
<b>Data Set Page Size</b>	131072
<b>Number of Data Set Pages</b>	6
<b>First Data Page</b>	1
<b>Max Obs per Page</b>	277
<b>Obs in First Data Page</b>	250
<b>Number of Data Set Repairs</b>	0
<b>Filename</b>	/saswork/SAS_work81DC0001E2CB_odaws04-prod-us/SAS_work59E20001E2CB_odaws04-prod-us/train.sas7bdat
<b>Release Created</b>	9.0401M5
<b>Host Created</b>	Linux
<b>Inode Number</b>	657193
<b>Access Permission</b>	rw-r--r--
<b>Owner Name</b>	eric.balke
<b>File Size</b>	896KB
<b>File Size (bytes)</b>	917504

Alphabetic List of Variables and Attributes					
#	Variable	Type	Len	Format	Informat
44	1stFlrSF	Num	8	BEST12.	BEST32.
45	2ndFlrSF	Num	8	BEST12.	BEST32.
70	3SsnPorch	Num	8	BEST12.	BEST32.
7	Alley	Char	2	\$2.	\$2.
52	BedroomAbvGr	Num	8	BEST12.	BEST32.
16	BldgType	Char	6	\$6.	\$6.
32	BsmtCond	Char	2	\$2.	\$2.
33	BsmtExposure	Char	2	\$2.	\$2.
35	BsmtFinSF1	Num	8	BEST12.	BEST32.

## The CONTENTS Procedure

Alphabetic List of Variables and Attributes					
#	Variable	Type	Len	Format	Informat
37	BsmtFinSF2	Num	8	BEST12.	BEST32.
34	BsmtFinType1	Char	3	\$3.	\$3.
36	BsmtFinType2	Char	3	\$3.	\$3.
48	BsmtFullBath	Num	8	BEST12.	BEST32.
49	BsmtHalfBath	Num	8	BEST12.	BEST32.
31	BsmtQual	Char	2	\$2.	\$2.
38	BsmtUnfSF	Num	8	BEST12.	BEST32.
42	CentralAir	Char	1	\$1.	\$1.
14	Condition1	Char	6	\$6.	\$6.
15	Condition2	Char	6	\$6.	\$6.
43	Electrical	Char	5	\$5.	\$5.
69	EnclosedPorch	Num	8	BEST12.	BEST32.
29	ExterCond	Char	2	\$2.	\$2.
28	ExterQual	Char	2	\$2.	\$2.
24	Exterior1st	Char	7	\$7.	\$7.
25	Exterior2nd	Char	7	\$7.	\$7.
74	Fence	Char	5	\$5.	\$5.
58	FireplaceQu	Char	2	\$2.	\$2.
57	Fireplaces	Num	8	BEST12.	BEST32.
30	Foundation	Char	6	\$6.	\$6.
50	FullBath	Num	8	BEST12.	BEST32.
56	Functional	Char	4	\$4.	\$4.
63	GarageArea	Num	8	BEST12.	BEST32.
62	GarageCars	Num	8	BEST12.	BEST32.
65	GarageCond	Char	2	\$2.	\$2.
61	GarageFinish	Char	3	\$3.	\$3.
64	GarageQual	Char	2	\$2.	\$2.
59	GarageType	Char	7	\$7.	\$7.
60	GarageYrBlt	Char	4	\$4.	\$4.
47	GrLivArea	Num	8	BEST12.	BEST32.
51	HalfBath	Num	8	BEST12.	BEST32.
40	Heating	Char	4	\$4.	\$4.
41	HeatingQC	Char	2	\$2.	\$2.
17	HouseStyle	Char	6	\$6.	\$6.
1	Id	Num	8	BEST12.	BEST32.
53	KitchenAbvGr	Num	8	BEST12.	BEST32.

## The CONTENTS Procedure

Alphabetic List of Variables and Attributes					
#	Variable	Type	Len	Format	Informat
54	KitchenQual	Char	2	\$2.	\$2.
9	LandContour	Char	3	\$3.	\$3.
12	LandSlope	Char	3	\$3.	\$3.
5	LotArea	Num	8	BEST12.	BEST32.
11	LotConfig	Char	7	\$7.	\$7.
4	LotFrontage	Char	2	\$2.	\$2.
8	LotShape	Char	3	\$3.	\$3.
46	LowQualFinSF	Num	8	BEST12.	BEST32.
2	MSSubClass	Num	8	BEST12.	BEST32.
3	MSZoning	Char	2	\$2.	\$2.
27	MasVnrArea	Num	8	BEST12.	BEST32.
26	MasVnrType	Char	7	\$7.	\$7.
75	MiscFeature	Char	4	\$4.	\$4.
76	MiscVal	Num	8	BEST12.	BEST32.
77	MoSold	Num	8	BEST12.	BEST32.
13	Neighborhood	Char	7	\$7.	\$7.
68	OpenPorchSF	Num	8	BEST12.	BEST32.
19	OverallCond	Num	8	BEST12.	BEST32.
18	OverallQual	Num	8	BEST12.	BEST32.
66	PavedDrive	Char	1	\$1.	\$1.
72	PoolArea	Num	8	BEST12.	BEST32.
73	PoolQC	Char	2	\$2.	\$2.
23	RoofMatl	Char	7	\$7.	\$7.
22	RoofStyle	Char	5	\$5.	\$5.
80	SaleCondition	Char	7	\$7.	\$7.
81	SalePrice	Num	8	BEST12.	BEST32.
79	SaleType	Char	3	\$3.	\$3.
71	ScreenPorch	Num	8	BEST12.	BEST32.
6	Street	Char	4	\$4.	\$4.
55	TotRmsAbvGrd	Num	8	BEST12.	BEST32.
39	TotalBsmtSF	Num	8	BEST12.	BEST32.
10	Utilities	Char	6	\$6.	\$6.
67	WoodDeckSF	Num	8	BEST12.	BEST32.
20	YearBuilt	Num	8	BEST12.	BEST32.
21	YearRemodAdd	Num	8	BEST12.	BEST32.
78	YrSold	Num	8	BEST12.	BEST32.

Obs	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	LotConfig	LandSlope
1	1	60	RL	65	8450	Pave	NA	Reg	Lvl	AllPub	Inside	Gtl
2	2	20	RL	80	9600	Pave	NA	Reg	Lvl	AllPub	FR2	Gtl
3	3	60	RL	68	11250	Pave	NA	IR1	Lvl	AllPub	Inside	Gtl

Obs	Neighborhood	Condition1	Condition2	BldgType	HouseStyle	OverallQual	OverallCond	YearBuilt	YearRemodAdd	RoofStyle
1	CollgCr	Norm	Norm	1Fam	2Story	7	5	2003	2003	Gable
2	Veenker	Feedr	Norm	1Fam	1Story	6	8	1976	1976	Gable
3	CollgCr	Norm	Norm	1Fam	2Story	7	5	2001	2002	Gable

Obs	RoofMatl	Exterior1st	Exterior2nd	MasVnrType	MasVnrArea	ExterQual	ExterCond	Foundation	BsmtQual	BsmtCond
1	CompShg	VinylSd	VinylSd	BrkFace	196	Gd	TA	PCconc	Gd	TA
2	CompShg	MetalSd	MetalSd	None	0	TA	TA	CBlock	Gd	TA
3	CompShg	VinylSd	VinylSd	BrkFace	162	Gd	TA	PCconc	Gd	TA

Obs	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2	BsmtFinSF2	BsmtUnfSF	TotalBsmtSF	Heating	HeatingQC
1	No	GLQ	706	Unf	0	150	856	GasA	Ex
2	Gd	ALQ	978	Unf	0	284	1262	GasA	Ex
3	Mn	GLQ	486	Unf	0	434	920	GasA	Ex

Obs	CentralAir	Electrical	1stFlrSF	2ndFlrSF	LowQualFinSF	GrLivArea	BsmtFullBath	BsmtHalfBath	FullBath	HalfBath
1	Y	SBrkr	856	854	0	1710	1	0	2	1
2	Y	SBrkr	1262	0	0	1262	0	1	2	0
3	Y	SBrkr	920	866	0	1786	1	0	2	1

Obs	BedroomAbvGr	KitchenAbvGr	KitchenQual	TotRmsAbvGrd	Functional	Fireplaces	FireplaceQu	GarageType	GarageYrBlt
1	3	1	Gd	8	Typ	0	NA	Attchd	2003
2	3	1	TA	6	Typ	1	TA	Attchd	1976
3	3	1	Gd	6	Typ	1	TA	Attchd	2001

Obs	GarageFinish	GarageCars	GarageArea	GarageQual	GarageCond	PavedDrive	WoodDeckSF	OpenPorchSF	EnclosedPorch
1	RFn	2	548	TA	TA	Y	0	61	0
2	RFn	2	460	TA	TA	Y	298	0	0
3	RFn	2	608	TA	TA	Y	0	42	0

Obs	3SsnPorch	ScreenPorch	PoolArea	PoolQC	Fence	MiscFeature	MiscVal	MoSold	YrSold	SaleType	SaleCondition	SalePrice
1	0	0	0	NA	NA	NA	0	2	2008	WD	Normal	208500
2	0	0	0	NA	NA	NA	0	5	2007	WD	Normal	181500
3	0	0	0	NA	NA	NA	0	9	2008	WD	Normal	223500

Obs	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	LotConfig	LandSlope
4	4	70	RL	60	9550	Pave	NA	IR1	Lvl	AllPub	Corner	Gtl
5	5	60	RL	84	14260	Pave	NA	IR1	Lvl	AllPub	FR2	Gtl
6	6	50	RL	85	14115	Pave	NA	IR1	Lvl	AllPub	Inside	Gtl

Obs	Neighborhood	Condition1	Condition2	BldgType	HouseStyle	OverallQual	OverallCond	YearBuilt	YearRemodAdd	RoofStyle
4	Crawfor	Norm	Norm	1Fam	2Story	7	5	1915	1970	Gable
5	NoRidge	Norm	Norm	1Fam	2Story	8	5	2000	2000	Gable
6	Mitchel	Norm	Norm	1Fam	1.5Fin	5	5	1993	1995	Gable

Obs	RoofMatl	Exterior1st	Exterior2nd	MasVnrType	MasVnrArea	ExterQual	ExterCond	Foundation	BsmtQual	BsmtCond
4	CompShg	Wd Sdng	Wd Shng	None	0	TA	TA	BrkTil	TA	Gd
5	CompShg	VinylSd	VinylSd	BrkFace	350	Gd	TA	PCconc	Gd	TA
6	CompShg	VinylSd	VinylSd	None	0	TA	TA	Wood	Gd	TA

Obs	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2	BsmtFinSF2	BsmtUnfSF	TotalBsmtSF	Heating	HeatingQC
4	No	ALQ	216	Unf	0	540	756	GasA	Gd
5	Av	GLQ	655	Unf	0	490	1145	GasA	Ex
6	No	GLQ	732	Unf	0	64	796	GasA	Ex

Obs	CentralAir	Electrical	1stFlrSF	2ndFlrSF	LowQualFinSF	GrLivArea	BsmtFullBath	BsmtHalfBath	FullBath	HalfBath
4	Y	SBrkr	961	756	0	1717	1	0	1	0
5	Y	SBrkr	1145	1053	0	2198	1	0	2	1
6	Y	SBrkr	796	566	0	1362	1	0	1	1

Obs	BedroomAbvGr	KitchenAbvGr	KitchenQual	TotRmsAbvGrd	Functional	Fireplaces	FireplaceQu	GarageType	GarageYrBlt
4	3	1	Gd	7	Typ	1	Gd	Detchd	1998
5	4	1	Gd	9	Typ	1	TA	Attchd	2000
6	1	1	TA	5	Typ	0	NA	Attchd	1993

Obs	GarageFinish	GarageCars	GarageArea	GarageQual	GarageCond	PavedDrive	WoodDeckSF	OpenPorchSF	EnclosedPorch
4	Unf	3	642	TA	TA	Y	0	35	272
5	RFn	3	836	TA	TA	Y	192	84	0
6	Unf	2	480	TA	TA	Y	40	30	0

Obs	3SsnPorch	ScreenPorch	PoolArea	PoolQC	Fence	MiscFeature	MiscVal	MoSold	YrSold	SaleType	SaleCondition	SalePrice
4	0	0	0	NA	NA	NA	0	2	2006	WD	Abnorml	140000
5	0	0	0	NA	NA	NA	0	12	2008	WD	Normal	250000
6	320	0	0	NA	MnPrv	Shed	700	10	2009	WD	Normal	143000

Obs	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	LotConfig	LandSlope
7	7	20	RL	75	10084	Pave	NA	Reg	Lvl	AllPub	Inside	Gtl
8	8	60	RL	NA	10382	Pave	NA	IR1	Lvl	AllPub	Corner	Gtl

Obs	Neighborhood	Condition1	Condition2	BldgType	HouseStyle	OverallQual	OverallCond	YearBuilt	YearRemodAdd	RoofStyle
7	Somerst	Norm	Norm	1Fam	1Story	8	5	2004	2005	Gable
8	NWAmes	PosN	Norm	1Fam	2Story	7	6	1973	1973	Gable

Obs	RoofMatl	Exterior1st	Exterior2nd	MasVnrType	MasVnrArea	ExterQual	ExterCond	Foundation	BsmtQual	BsmtCond
7	CompShg	VinylSd	VinylSd	Stone	186	Gd	TA	PConc	Ex	TA
8	CompShg	HdBoard	HdBoard	Stone	240	TA	TA	CBlock	Gd	TA

Obs	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2	BsmtFinSF2	BsmtUnfSF	TotalBsmtSF	Heating	HeatingQC
7	Av	GLQ	1369	Unf	0	317	1686	GasA	Ex
8	Mn	ALQ	859	BLQ	32	216	1107	GasA	Ex

Obs	CentralAir	Electrical	1stFlrSF	2ndFlrSF	LowQualFinSF	GrLivArea	BsmtFullBath	BsmtHalfBath	FullBath	HalfBath
7	Y	SBrkr	1694	0	0	1694	1	0	2	0
8	Y	SBrkr	1107	983	0	2090	1	0	2	1

Obs	BedroomAbvGr	KitchenAbvGr	KitchenQual	TotRmsAbvGrd	Functional	Fireplaces	FireplaceQu	GarageType	GarageYrBlt
7	3	1	Gd	7	Typ	1	Gd	Attchd	2004
8	3	1	TA	7	Typ	2	TA	Attchd	1973

Obs	GarageFinish	GarageCars	GarageArea	GarageQual	GarageCond	PavedDrive	WoodDeckSF	OpenPorchSF	EnclosedPorch
7	RFn	2	636	TA	TA	Y	255	57	0
8	RFn	2	484	TA	TA	Y	235	204	228

Obs	3SsnPorch	ScreenPorch	PoolArea	PoolQC	Fence	MiscFeature	MiscVal	MoSold	YrSold	SaleType	SaleCondition	SalePrice
7	0	0	0	NA	NA	NA	0	8	2007	WD	Normal	307000
8	0	0	0	NA	NA	Shed	350	11	2009	WD	Normal	200000

Obs	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	LotConfig	LandSlope
9	9	50	RM	51	6120	Pave	NA	Reg	Lvl	AllPub	Inside	Gtl
10	10	190	RL	50	7420	Pave	NA	Reg	Lvl	AllPub	Corner	Gtl

Obs	Neighborhood	Condition1	Condition2	BldgType	HouseStyle	OverallQual	OverallCond	YearBuilt	YearRemodAdd	RoofStyle
9	OldTown	Artery	Norm	1Fam	1.5Fin	7	5	1931	1950	Gable
10	BrkSide	Artery	Artery	2fmCon	1.5Unf	5	6	1939	1950	Gable

Obs	RoofMatl	Exterior1st	Exterior2nd	MasVnrType	MasVnrArea	ExterQual	ExterCond	Foundation	BsmtQual	BsmtCond
9	CompShg	BrkFace	Wd Shng	None	0	TA	TA	BrkTil	TA	TA
10	CompShg	MetalSd	MetalSd	None	0	TA	TA	BrkTil	TA	TA

Obs	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2	BsmtFinSF2	BsmtUnfSF	TotalBsmtSF	Heating	HeatingQC
9	No	Unf	0	Unf	0	952	952	GasA	Gd
10	No	GLQ	851	Unf	0	140	991	GasA	Ex

Obs	CentralAir	Electrical	1stFlrSF	2ndFlrSF	LowQualFinSF	GrLivArea	BsmtFullBath	BsmtHalfBath	FullBath	HalfBath
9	Y	FuseF	1022	752	0	1774	0	0	2	0
10	Y	SBrkr	1077	0	0	1077	1	0	1	0

Obs	BedroomAbvGr	KitchenAbvGr	KitchenQual	TotRmsAbvGrd	Functional	Fireplaces	FireplaceQu	GarageType	GarageYrBlt
9	2	2	TA	8	Min1	2	TA	Detchd	1931
10	2	2	TA	5	Typ	2	TA	Attchd	1939

Obs	GarageFinish	GarageCars	GarageArea	GarageQual	GarageCond	PavedDrive	WoodDeckSF	OpenPorchSF	EnclosedPorch
9	Unf	2	468	Fa	TA	Y	90	0	205
10	RFn	1	205	Gd	TA	Y	0	4	0

Obs	3SsnPorch	ScreenPorch	PoolArea	PoolQC	Fence	MiscFeature	MiscVal	MoSold	YrSold	SaleType	SaleCondition	SalePrice
9	0	0	0	NA	NA	NA	0	4	2008	WD	Abnorml	129900
10	0	0	0	NA	NA	NA	0	1	2008	WD	Normal	118000

**The UNIVARIATE Procedure**  
**Variable: Id**

<b>Moments</b>			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	744.010444	<b>Sum Observations</b>	284956
<b>Std Deviation</b>	426.406352	<b>Variance</b>	181822.377
<b>Skewness</b>	-0.0324234	<b>Kurtosis</b>	-1.2121202
<b>Uncorrected SS</b>	281466388	<b>Corrected SS</b>	69456148
<b>Coeff Variation</b>	57.3118772	<b>Std Error Mean</b>	21.7883468

<b>Basic Statistical Measures</b>			
<b>Location</b>		<b>Variability</b>	
<b>Mean</b>	744.0104	<b>Std Deviation</b>	426.40635
<b>Median</b>	729.0000	<b>Variance</b>	181822
<b>Mode</b>	.	<b>Range</b>	1450
		<b>Interquartile Range</b>	744.00000

<b>Tests for Location: Mu0=0</b>				
<b>Test</b>	<b>Statistic</b>		<b>p Value</b>	
<b>Student's t</b>	<b>t</b>	34.14717	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36768	<b>Pr &gt;=  S </b>	<.0001

<b>Quantiles (Definition 5)</b>	
<b>Level</b>	<b>Quantile</b>
<b>100% Max</b>	1460
<b>99%</b>	1451
<b>95%</b>	1393
<b>90%</b>	1321
<b>75% Q3</b>	1120
<b>50% Median</b>	729
<b>25% Q1</b>	376
<b>10%</b>	143
<b>5%</b>	74
<b>1%</b>	17
<b>0% Min</b>	10

**The UNIVARIATE Procedure**  
**Variable: Id**

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
10	1	1449	379
15	2	1451	380
16	3	1453	381
17	4	1459	382
20	5	1460	383

**The UNIVARIATE Procedure**  
**Variable: MSSubClass**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	45.1436031	<b>Sum Observations</b>	17290
<b>Std Deviation</b>	35.8303559	<b>Variance</b>	1283.8144
<b>Skewness</b>	2.08154873	<b>Kurtosis</b>	5.14899537
<b>Uncorrected SS</b>	1270950	<b>Corrected SS</b>	490417.102
<b>Coeff Variation</b>	79.3697299	<b>Std Error Mean</b>	1.83084566

Basic Statistical Measures				
Location		Variability		
<b>Mean</b>	45.14360	<b>Std Deviation</b>	35.83036	
<b>Median</b>	30.00000	<b>Variance</b>		1284
<b>Mode</b>	20.00000	<b>Range</b>		170.00000
		<b>Interquartile Range</b>		40.00000

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	24.65724	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36768	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	190
<b>99%</b>	190
<b>95%</b>	90
<b>90%</b>	90
<b>75% Q3</b>	60
<b>50% Median</b>	30
<b>25% Q1</b>	20
<b>10%</b>	20
<b>5%</b>	20
<b>1%</b>	20
<b>0% Min</b>	20

The UNIVARIATE Procedure  
Variable: MSSubClass

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
20	383	190	137
20	382	190	187
20	377	190	248
20	376	190	254
20	374	190	296

**The UNIVARIATE Procedure**  
**Variable: LotArea**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	9739.55614	<b>Sum Observations</b>	3730250
<b>Std Deviation</b>	4593.93846	<b>Variance</b>	21104270.6
<b>Skewness</b>	5.77925698	<b>Kurtosis</b>	56.5503311
<b>Uncorrected SS</b>	4.43928E10	<b>Corrected SS</b>	8061831351
<b>Coeff Variation</b>	47.1678421	<b>Std Error Mean</b>	234.73929

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	9739.556	<b>Std Deviation</b>	4594
<b>Median</b>	9098.000	<b>Variance</b>	21104271
<b>Mode</b>	9600.000	<b>Range</b>	61365
		<b>Interquartile Range</b>	3069

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	41.49095	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36768	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	63887
<b>99%</b>	27650
<b>95%</b>	15865
<b>90%</b>	13053
<b>75% Q3</b>	10659
<b>50% Median</b>	9098
<b>25% Q1</b>	7590
<b>10%</b>	6155
<b>5%</b>	5868
<b>1%</b>	3363
<b>0% Min</b>	2522

The UNIVARIATE Procedure  
Variable: LotArea

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
2522	278	25419	53
2522	52	27650	240
2522	40	31770	46
3363	341	40094	131
3675	381	63887	339

**The UNIVARIATE Procedure**  
**Variable: OverallQual**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	5.24020888	<b>Sum Observations</b>	2007
<b>Std Deviation</b>	1.03587581	<b>Variance</b>	1.0730387
<b>Skewness</b>	0.18775618	<b>Kurtosis</b>	3.45369551
<b>Uncorrected SS</b>	10927	<b>Corrected SS</b>	409.900783
<b>Coeff Variation</b>	19.7678344	<b>Std Error Mean</b>	0.05293078

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	5.240209	<b>Std Deviation</b>	1.03588
<b>Median</b>	5.000000	<b>Variance</b>	1.07304
<b>Mode</b>	5.000000	<b>Range</b>	9.00000
		<b>Interquartile Range</b>	1.00000

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	99.00116	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36768	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	10
<b>99%</b>	8
<b>95%</b>	7
<b>90%</b>	6
<b>75% Q3</b>	6
<b>50% Median</b>	5
<b>25% Q1</b>	5
<b>10%</b>	4
<b>5%</b>	4
<b>1%</b>	3
<b>0% Min</b>	1

The UNIVARIATE Procedure  
Variable: OverallQual

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
1	136	8	169
1	96	8	227
2	167	9	190
3	359	10	131
3	348	10	339

**The UNIVARIATE Procedure**  
**Variable: OverallCond**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	5.75195822	<b>Sum Observations</b>	2203
<b>Std Deviation</b>	1.25267884	<b>Variance</b>	1.56920427
<b>Skewness</b>	-0.1406994	<b>Kurtosis</b>	0.44505062
<b>Uncorrected SS</b>	13271	<b>Corrected SS</b>	599.436031
<b>Coeff Variation</b>	21.7783021	<b>Std Error Mean</b>	0.0640089

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	5.751958	<b>Std Deviation</b>	1.25268
<b>Median</b>	6.000000	<b>Variance</b>	1.56920
<b>Mode</b>	5.000000	<b>Range</b>	8.00000
		<b>Interquartile Range</b>	2.00000

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	89.86185	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36768	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	9
<b>99%</b>	9
<b>95%</b>	8
<b>90%</b>	7
<b>75% Q3</b>	7
<b>50% Median</b>	6
<b>25% Q1</b>	5
<b>10%</b>	4
<b>5%</b>	4
<b>1%</b>	3
<b>0% Min</b>	1

The UNIVARIATE Procedure  
Variable: OverallCond

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
1	96	9	51
2	64	9	253
3	359	9	290
3	345	9	353
3	314	9	376

**The UNIVARIATE Procedure**  
**Variable: YearBuilt**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	1954.6188	<b>Sum Observations</b>	748619
<b>Std Deviation</b>	19.5311769	<b>Variance</b>	381.466871
<b>Skewness</b>	0.04202327	<b>Kurtosis</b>	1.07038045
<b>Uncorrected SS</b>	1463410491	<b>Corrected SS</b>	145720.345
<b>Coeff Variation</b>	0.99923202	<b>Std Error Mean</b>	0.99799652

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	1954.619	<b>Std Deviation</b>	19.53118
<b>Median</b>	1957.000	<b>Variance</b>	381.46687
<b>Mode</b>	1959.000	<b>Range</b>	109.00000
		<b>Interquartile Range</b>	18.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	1958.543	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36768	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	2009
<b>99%</b>	2007
<b>95%</b>	1990
<b>90%</b>	1971
<b>75% Q3</b>	1965
<b>50% Median</b>	1957
<b>25% Q1</b>	1947
<b>10%</b>	1925
<b>5%</b>	1920
<b>1%</b>	1910
<b>0% Min</b>	1900

**The UNIVARIATE Procedure**  
**Variable: YearBuilt**

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
1900	238	2006	31
1900	99	2007	131
1908	50	2007	190
1910	379	2008	339
1910	250	2009	58

**The UNIVARIATE Procedure**  
**Variable: YearRemodAdd**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	1972.07311	<b>Sum Observations</b>	755304
<b>Std Deviation</b>	20.5740874	<b>Variance</b>	423.293071
<b>Skewness</b>	0.56447129	<b>Kurtosis</b>	-1.2480437
<b>Uncorrected SS</b>	1489676404	<b>Corrected SS</b>	161697.953
<b>Coeff Variation</b>	1.04327204	<b>Std Error Mean</b>	1.05128675

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	1972.073	<b>Std Deviation</b>	20.57409
<b>Median</b>	1965.000	<b>Variance</b>	423.29307
<b>Mode</b>	1950.000	<b>Range</b>	59.00000
		<b>Interquartile Range</b>	41.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	1875.866	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36768	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	2009
<b>99%</b>	2008
<b>95%</b>	2006
<b>90%</b>	2004
<b>75% Q3</b>	1995
<b>50% Median</b>	1965
<b>25% Q1</b>	1954
<b>10%</b>	1950
<b>5%</b>	1950
<b>1%</b>	1950
<b>0% Min</b>	1950

The UNIVARIATE Procedure  
Variable: YearRemodAdd

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
1950	378	2008	290
1950	375	2008	316
1950	369	2008	339
1950	367	2008	355
1950	362	2009	58

**The UNIVARIATE Procedure**  
**Variable: MasVnrArea**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	73.7154047	<b>Sum Observations</b>	28233
<b>Std Deviation</b>	145.208299	<b>Variance</b>	21085.4502
<b>Skewness</b>	3.26698025	<b>Kurtosis</b>	15.0144847
<b>Uncorrected SS</b>	10135849	<b>Corrected SS</b>	8054641.98
<b>Coeff Variation</b>	196.985013	<b>Std Error Mean</b>	7.41979749

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	73.71540	<b>Std Deviation</b>	145.20830
<b>Median</b>	0.00000	<b>Variance</b>	21085
<b>Mode</b>	0.00000	<b>Range</b>	1115
		<b>Interquartile Range</b>	108.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	9.934962	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	65.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	4323	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	1115
<b>99%</b>	762
<b>95%</b>	340
<b>90%</b>	250
<b>75% Q3</b>	108
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

**The UNIVARIATE Procedure**  
**Variable: MasVnrArea**

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	383	650	10
0	382	762	131
0	380	796	339
0	379	1047	206
0	378	1115	19

**The UNIVARIATE Procedure**  
**Variable: BsmtFinSF1**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	425.746736	<b>Sum Observations</b>	163061
<b>Std Deviation</b>	451.284578	<b>Variance</b>	203657.771
<b>Skewness</b>	4.46514412	<b>Kurtosis</b>	46.3645906
<b>Uncorrected SS</b>	147219957	<b>Corrected SS</b>	77797268.4
<b>Coeff Variation</b>	105.998365	<b>Std Error Mean</b>	23.0595648

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	425.7467	<b>Std Deviation</b>	451.28458
<b>Median</b>	400.0000	<b>Variance</b>	203658
<b>Mode</b>	0.0000	<b>Range</b>	5644
		<b>Interquartile Range</b>	633.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	18.46291	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	139	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	19390.5	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	5644
<b>99%</b>	1440
<b>95%</b>	1036
<b>90%</b>	867
<b>75% Q3</b>	633
<b>50% Median</b>	400
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

**The UNIVARIATE Procedure**  
**Variable: BsmtFinSF1**

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	380	1410	169
0	379	1440	242
0	378	1880	19
0	376	2260	131
0	374	5644	339

**The UNIVARIATE Procedure**  
**Variable: BsmtFinSF2**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	64.0626632	<b>Sum Observations</b>	24536
<b>Std Deviation</b>	169.425133	<b>Variance</b>	28704.8756
<b>Skewness</b>	3.0539649	<b>Kurtosis</b>	9.46864984
<b>Uncorrected SS</b>	12537104	<b>Corrected SS</b>	10965262.5
<b>Coeff Variation</b>	264.467826	<b>Std Error Mean</b>	8.65721988

Basic Statistical Measures				
Location		Variability		
<b>Mean</b>	64.06266	<b>Std Deviation</b>	169.42513	
<b>Median</b>	0.00000	<b>Variance</b>	28705	
<b>Mode</b>	0.00000	<b>Range</b>	1029	
		<b>Interquartile Range</b>	0	

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	7.399912	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	34	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	1173	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	1029
<b>99%</b>	823
<b>95%</b>	472
<b>90%</b>	279
<b>75% Q3</b>	0
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

**The UNIVARIATE Procedure**  
**Variable: BsmtFinSF2**

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	381	791	276
0	380	823	227
0	379	872	371
0	378	906	340
0	377	1029	382

**The UNIVARIATE Procedure**  
**Variable: BsmtUnfSF**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	463.882507	<b>Sum Observations</b>	177667
<b>Std Deviation</b>	362.863278	<b>Variance</b>	131669.758
<b>Skewness</b>	0.74855872	<b>Kurtosis</b>	0.22927172
<b>Uncorrected SS</b>	132714461	<b>Corrected SS</b>	50297847.7
<b>Coeff Variation</b>	78.2231002	<b>Std Error Mean</b>	18.5414474

Basic Statistical Measures				
Location		Variability		
<b>Mean</b>	463.8825	<b>Std Deviation</b>	362.86328	
<b>Median</b>	410.0000	<b>Variance</b>	131670	
<b>Mode</b>	0.0000	<b>Range</b>	1800	
		<b>Interquartile Range</b>	546.00000	

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	25.01868	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	167	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	27972.5	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	1800
<b>99%</b>	1497
<b>95%</b>	1121
<b>90%</b>	952
<b>75% Q3</b>	708
<b>50% Median</b>	410
<b>25% Q1</b>	162
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: BsmtUnfSF

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	382	1436	113
0	381	1497	147
0	369	1584	192
0	348	1584	363
0	346	1800	216

**The UNIVARIATE Procedure**  
**Variable: TotalBsmtSF**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	953.691906	<b>Sum Observations</b>	365264
<b>Std Deviation</b>	471.106133	<b>Variance</b>	221940.989
<b>Skewness</b>	3.49965712	<b>Kurtosis</b>	38.3464635
<b>Uncorrected SS</b>	433130778	<b>Corrected SS</b>	84781457.6
<b>Coeff Variation</b>	49.3981474	<b>Std Error Mean</b>	24.0723989

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	953.6919	<b>Std Deviation</b>	471.10613
<b>Median</b>	948.0000	<b>Variance</b>	221941
<b>Mode</b>	0.0000	<b>Range</b>	6110
		<b>Interquartile Range</b>	347.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	39.61765	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	179.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	32310	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	6110
<b>99%</b>	2217
<b>95%</b>	1486
<b>90%</b>	1362
<b>75% Q3</b>	1127
<b>50% Median</b>	948
<b>25% Q1</b>	780
<b>10%</b>	547
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

**The UNIVARIATE Procedure**  
**Variable: TotalBsmtSF**

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	369	2136	314
0	346	2217	227
0	319	2223	19
0	311	3138	131
0	304	6110	339

**The UNIVARIATE Procedure**  
**Variable: 1stFlrSF**

<b>Moments</b>			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	1112.79373	<b>Sum Observations</b>	426200
<b>Std Deviation</b>	367.702605	<b>Variance</b>	135205.206
<b>Skewness</b>	3.43063206	<b>Kurtosis</b>	25.5478816
<b>Uncorrected SS</b>	525921078	<b>Corrected SS</b>	51648388.7
<b>Coeff Variation</b>	33.0431952	<b>Std Error Mean</b>	18.7887254

<b>Basic Statistical Measures</b>			
<b>Location</b>		<b>Variability</b>	
<b>Mean</b>	1112.794	<b>Std Deviation</b>	367.70261
<b>Median</b>	1053.000	<b>Variance</b>	135205
<b>Mode</b>	864.000	<b>Range</b>	4358
		<b>Interquartile Range</b>	342.00000

<b>Tests for Location: Mu0=0</b>				
<b>Test</b>	<b>Statistic</b>		<b>p Value</b>	
<b>Student's t</b>	<b>t</b>	59.22667	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36768	<b>Pr &gt;=  S </b>	<.0001

<b>Quantiles (Definition 5)</b>	
<b>Level</b>	<b>Quantile</b>
<b>100% Max</b>	4692
<b>99%</b>	2217
<b>95%</b>	1700
<b>90%</b>	1478
<b>75% Q3</b>	1236
<b>50% Median</b>	1053
<b>25% Q1</b>	894
<b>10%</b>	784
<b>5%</b>	698
<b>1%</b>	572
<b>0% Min</b>	334

The UNIVARIATE Procedure  
Variable: 1stFlrSF

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
334	136	2207	18
495	90	2217	227
520	8	2223	19
572	43	3138	131
576	149	4692	339

**The UNIVARIATE Procedure**  
**Variable: 2ndFlrSF**

<b>Moments</b>			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	186.062663	<b>Sum Observations</b>	71262
<b>Std Deviation</b>	325.319008	<b>Variance</b>	105832.457
<b>Skewness</b>	1.59387064	<b>Kurtosis</b>	1.63278356
<b>Uncorrected SS</b>	53687196	<b>Corrected SS</b>	40427998.5
<b>Coeff Variation</b>	174.843788	<b>Std Error Mean</b>	16.6230248

<b>Basic Statistical Measures</b>			
<b>Location</b>		<b>Variability</b>	
<b>Mean</b>	186.0627	<b>Std Deviation</b>	325.31901
<b>Median</b>	0.0000	<b>Variance</b>	105832
<b>Mode</b>	0.0000	<b>Range</b>	1538
		<b>Interquartile Range</b>	406.00000

<b>Tests for Location: Mu0=0</b>				
<b>Test</b>	<b>Statistic</b>		<b>p Value</b>	
<b>Student's t</b>	<b>t</b>	11.19307	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	54.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	2997.5	<b>Pr &gt;=  S </b>	<.0001

<b>Quantiles (Definition 5)</b>	
<b>Level</b>	<b>Quantile</b>
<b>100% Max</b>	1538
<b>99%</b>	1296
<b>95%</b>	883
<b>90%</b>	728
<b>75% Q3</b>	406
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: 2ndFlrSF

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	383	1169	234
0	382	1296	351
0	381	1360	53
0	378	1427	90
0	377	1538	131

**The UNIVARIATE Procedure**  
**Variable: LowQualFinSF**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	2.97650131	<b>Sum Observations</b>	1140
<b>Std Deviation</b>	30.6145941	<b>Variance</b>	937.253373
<b>Skewness</b>	11.002541	<b>Kurtosis</b>	125.483733
<b>Uncorrected SS</b>	361424	<b>Corrected SS</b>	358030.789
<b>Coeff Variation</b>	1028.54294	<b>Std Error Mean</b>	1.56433268

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	2.976501	<b>Std Deviation</b>	30.61459
<b>Median</b>	0.000000	<b>Variance</b>	937.25337
<b>Mode</b>	0.000000	<b>Range</b>	392.00000
		<b>Interquartile Range</b>	0

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	1.902729	<b>Pr &gt;  t </b>	0.0578
<b>Sign</b>	<b>M</b>	2	<b>Pr &gt;=  M </b>	0.1250
<b>Signed Rank</b>	<b>S</b>	5	<b>Pr &gt;=  S </b>	0.1250

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	392
<b>99%</b>	156
<b>95%</b>	0
<b>90%</b>	0
<b>75% Q3</b>	0
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: LowQualFinSF

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	383	0	383
0	382	156	155
0	381	232	222
0	380	360	15
0	379	392	53

**The UNIVARIATE Procedure**  
**Variable: GrLivArea**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	1301.8329	<b>Sum Observations</b>	498602
<b>Std Deviation</b>	485.518364	<b>Variance</b>	235728.082
<b>Skewness</b>	3.30311512	<b>Kurtosis</b>	22.302129
<b>Uncorrected SS</b>	739144614	<b>Corrected SS</b>	90048127.3
<b>Coeff Variation</b>	37.2949835	<b>Std Error Mean</b>	24.8088295

Basic Statistical Measures				
Location		Variability		
<b>Mean</b>	1301.833	<b>Std Deviation</b>	485.51836	
<b>Median</b>	1200.000	<b>Variance</b>	235728	
<b>Mode</b>	864.000	<b>Range</b>	5308	
		<b>Interquartile Range</b>	503.00000	

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	52.47458	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36768	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	5642
<b>99%</b>	2978
<b>95%</b>	2112
<b>90%</b>	1820
<b>75% Q3</b>	1505
<b>50% Median</b>	1200
<b>25% Q1</b>	1002
<b>10%</b>	864
<b>5%</b>	816
<b>1%</b>	616
<b>0% Min</b>	334

The UNIVARIATE Procedure  
Variable: GrLivArea

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
334	136	2704	169
520	8	2978	78
605	133	3112	53
616	184	4676	131
672	309	5642	339

**The UNIVARIATE Procedure**  
**Variable: BsmtFullBath**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	0.43342037	<b>Sum Observations</b>	166
<b>Std Deviation</b>	0.5318451	<b>Variance</b>	0.28285921
<b>Skewness</b>	0.74029253	<b>Kurtosis</b>	0.01169216
<b>Uncorrected SS</b>	180	<b>Corrected SS</b>	108.052219
<b>Coeff Variation</b>	122.70884	<b>Std Error Mean</b>	0.02717602

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	0.433420	<b>Std Deviation</b>	0.53185
<b>Median</b>	0.000000	<b>Variance</b>	0.28286
<b>Mode</b>	0.000000	<b>Range</b>	3.00000
		<b>Interquartile Range</b>	1.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	15.94864	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	80	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	6440	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	3
<b>99%</b>	2
<b>95%</b>	1
<b>90%</b>	1
<b>75% Q3</b>	1
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: BsmtFullBath

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	380	2	205
0	379	2	238
0	378	2	242
0	377	2	339
0	374	3	194

**The UNIVARIATE Procedure**  
**Variable: BsmtHalfBath**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	0.08093995	<b>Sum Observations</b>	31
<b>Std Deviation</b>	0.28252258	<b>Variance</b>	0.07981901
<b>Skewness</b>	3.43002025	<b>Kurtosis</b>	11.2798291
<b>Uncorrected SS</b>	33	<b>Corrected SS</b>	30.4908616
<b>Coeff Variation</b>	349.052094	<b>Std Error Mean</b>	0.01443623

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	0.080940	<b>Std Deviation</b>	0.28252
<b>Median</b>	0.000000	<b>Variance</b>	0.07982
<b>Mode</b>	0.000000	<b>Range</b>	2.00000
		<b>Interquartile Range</b>	0

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	5.606724	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	15	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	232.5	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	2
<b>99%</b>	1
<b>95%</b>	1
<b>90%</b>	0
<b>75% Q3</b>	0
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: BsmtHalfBath

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	383	1	301
0	382	1	315
0	381	1	351
0	380	1	362
0	379	2	245

**The UNIVARIATE Procedure**  
**Variable: FullBath**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	1.23498695	<b>Sum Observations</b>	473
<b>Std Deviation</b>	0.45433103	<b>Variance</b>	0.20641669
<b>Skewness</b>	1.49963853	<b>Kurtosis</b>	1.37471126
<b>Uncorrected SS</b>	663	<b>Corrected SS</b>	78.8511749
<b>Coeff Variation</b>	36.7883268	<b>Std Error Mean</b>	0.02321523

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	1.234987	<b>Std Deviation</b>	0.45433
<b>Median</b>	1.000000	<b>Variance</b>	0.20642
<b>Mode</b>	1.000000	<b>Range</b>	3.00000
		<b>Interquartile Range</b>	0

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	53.19727	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36576.5	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	3
<b>99%</b>	3
<b>95%</b>	2
<b>90%</b>	2
<b>75% Q3</b>	1
<b>50% Median</b>	1
<b>25% Q1</b>	1
<b>10%</b>	1
<b>5%</b>	1
<b>1%</b>	1
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: FullBath

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	96	2	380
1	383	3	90
1	382	3	131
1	381	3	157
1	379	3	194

**The UNIVARIATE Procedure**  
**Variable: HalfBath**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	0.22976501	<b>Sum Observations</b>	88
<b>Std Deviation</b>	0.45123646	<b>Variance</b>	0.20361434
<b>Skewness</b>	1.71106509	<b>Kurtosis</b>	1.94025254
<b>Uncorrected SS</b>	98	<b>Corrected SS</b>	77.7806789
<b>Coeff Variation</b>	196.390414	<b>Std Error Mean</b>	0.02305711

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	0.229765	<b>Std Deviation</b>	0.45124
<b>Median</b>	0.000000	<b>Variance</b>	0.20361
<b>Mode</b>	0.000000	<b>Range</b>	2.00000
		<b>Interquartile Range</b>	0

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	9.965041	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	41.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	1743	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	2
<b>99%</b>	2
<b>95%</b>	1
<b>90%</b>	1
<b>75% Q3</b>	0
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: HalfBath

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	382	2	164
0	381	2	238
0	378	2	300
0	377	2	351
0	374	2	380

**The UNIVARIATE Procedure**  
**Variable: BedroomAbvGr**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	2.8694517	<b>Sum Observations</b>	1099
<b>Std Deviation</b>	0.79506427	<b>Variance</b>	0.63212719
<b>Skewness</b>	0.64625233	<b>Kurtosis</b>	1.84542079
<b>Uncorrected SS</b>	3395	<b>Corrected SS</b>	241.472585
<b>Coeff Variation</b>	27.7078811	<b>Std Error Mean</b>	0.04062589

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	2.869452	<b>Std Deviation</b>	0.79506
<b>Median</b>	3.000000	<b>Variance</b>	0.63213
<b>Mode</b>	3.000000	<b>Range</b>	5.00000
		<b>Interquartile Range</b>	1.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	70.63112	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36768	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	6
<b>99%</b>	6
<b>95%</b>	4
<b>90%</b>	4
<b>75% Q3</b>	3
<b>50% Median</b>	3
<b>25% Q1</b>	2
<b>10%</b>	2
<b>5%</b>	2
<b>1%</b>	1
<b>0% Min</b>	1

The UNIVARIATE Procedure  
Variable: BedroomAbvGr

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
1	280	5	234
1	241	6	81
1	167	6	147
1	139	6	216
1	136	6	351

**The UNIVARIATE Procedure**  
**Variable: KitchenAbvGr**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	1.05483029	<b>Sum Observations</b>	404
<b>Std Deviation</b>	0.23915517	<b>Variance</b>	0.05719519
<b>Skewness</b>	3.33652812	<b>Kurtosis</b>	12.2578637
<b>Uncorrected SS</b>	448	<b>Corrected SS</b>	21.848564
<b>Coeff Variation</b>	22.6723834	<b>Std Error Mean</b>	0.01222026

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	1.054830	<b>Std Deviation</b>	0.23916
<b>Median</b>	1.000000	<b>Variance</b>	0.05720
<b>Mode</b>	1.000000	<b>Range</b>	2.00000
		<b>Interquartile Range</b>	0

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	86.31817	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36576.5	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	2
<b>99%</b>	2
<b>95%</b>	2
<b>90%</b>	1
<b>75% Q3</b>	1
<b>50% Median</b>	1
<b>25% Q1</b>	1
<b>10%</b>	1
<b>5%</b>	1
<b>1%</b>	1
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: KitchenAbvGr

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	245	2	332
1	383	2	351
1	382	2	363
1	381	2	369
1	379	2	380

**The UNIVARIATE Procedure**  
**Variable: TotRmsAbvGrd**

<b>Moments</b>			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	6.03133159	<b>Sum Observations</b>	2310
<b>Std Deviation</b>	1.42309303	<b>Variance</b>	2.02519377
<b>Skewness</b>	1.08407827	<b>Kurtosis</b>	2.52938032
<b>Uncorrected SS</b>	14706	<b>Corrected SS</b>	773.624021
<b>Coeff Variation</b>	23.5950056	<b>Std Error Mean</b>	0.07271666

<b>Basic Statistical Measures</b>			
<b>Location</b>		<b>Variability</b>	
<b>Mean</b>	6.031332	<b>Std Deviation</b>	1.42309
<b>Median</b>	6.000000	<b>Variance</b>	2.02519
<b>Mode</b>	6.000000	<b>Range</b>	10.00000
		<b>Interquartile Range</b>	2.00000

<b>Tests for Location: Mu0=0</b>				
<b>Test</b>	<b>Statistic</b>		<b>p Value</b>	
<b>Student's t</b>	<b>t</b>	82.94292	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36768	<b>Pr &gt;=  S </b>	<.0001

<b>Quantiles (Definition 5)</b>	
<b>Level</b>	<b>Quantile</b>
<b>100% Max</b>	12
<b>99%</b>	11
<b>95%</b>	8
<b>90%</b>	8
<b>75% Q3</b>	7
<b>50% Median</b>	6
<b>25% Q1</b>	5
<b>10%</b>	5
<b>5%</b>	4
<b>1%</b>	4
<b>0% Min</b>	2

The UNIVARIATE Procedure  
Variable: TotRmsAbvGrd

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
2	136	11	78
3	349	11	131
3	311	12	234
4	378	12	339
4	353	12	351

**The UNIVARIATE Procedure**  
**Variable: Fireplaces**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	0.47519582	<b>Sum Observations</b>	182
<b>Std Deviation</b>	0.67396296	<b>Variance</b>	0.45422607
<b>Skewness</b>	1.25110033	<b>Kurtosis</b>	0.90400348
<b>Uncorrected SS</b>	260	<b>Corrected SS</b>	173.51436
<b>Coeff Variation</b>	141.828469	<b>Std Error Mean</b>	0.0344379

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	0.475196	<b>Std Deviation</b>	0.67396
<b>Median</b>	0.000000	<b>Variance</b>	0.45423
<b>Mode</b>	0.000000	<b>Range</b>	3.00000
		<b>Interquartile Range</b>	1.00000

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	13.79863	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	73	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	5365.5	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	3
<b>99%</b>	2
<b>95%</b>	2
<b>90%</b>	1
<b>75% Q3</b>	1
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

**The UNIVARIATE Procedure**  
**Variable: Fireplaces**

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	383	2	345
0	382	2	360
0	381	3	156
0	380	3	169
0	379	3	339

**The UNIVARIATE Procedure**  
**Variable: GarageCars**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	1.37597911	<b>Sum Observations</b>	527
<b>Std Deviation</b>	0.69752556	<b>Variance</b>	0.48654191
<b>Skewness</b>	-0.1085043	<b>Kurtosis</b>	0.20878351
<b>Uncorrected SS</b>	911	<b>Corrected SS</b>	185.859008
<b>Coeff Variation</b>	50.693034	<b>Std Error Mean</b>	0.03564189

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	1.375979	<b>Std Deviation</b>	0.69753
<b>Median</b>	1.000000	<b>Variance</b>	0.48654
<b>Mode</b>	1.000000	<b>Range</b>	4.00000
		<b>Interquartile Range</b>	1.00000

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	38.60567	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	172.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	29842.5	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	4
<b>99%</b>	3
<b>95%</b>	2
<b>90%</b>	2
<b>75% Q3</b>	2
<b>50% Median</b>	1
<b>25% Q1</b>	1
<b>10%</b>	1
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

**The UNIVARIATE Procedure**  
**Variable: GarageCars**

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	380	3	190
0	348	3	192
0	347	3	363
0	325	4	350
0	311	4	351

**The UNIVARIATE Procedure**  
**Variable: GarageArea**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	381.976501	<b>Sum Observations</b>	146297
<b>Std Deviation</b>	197.677992	<b>Variance</b>	39076.5885
<b>Skewness</b>	0.28873636	<b>Kurtosis</b>	1.86075862
<b>Uncorrected SS</b>	70809273	<b>Corrected SS</b>	14927256.8
<b>Coeff Variation</b>	51.7513489	<b>Std Error Mean</b>	10.1008735

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	381.9765	<b>Std Deviation</b>	197.67799
<b>Median</b>	380.0000	<b>Variance</b>	39077
<b>Mode</b>	0.0000	<b>Range</b>	1418
		<b>Interquartile Range</b>	229.00000

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	37.81618	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	172.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	29842.5	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	1418
<b>99%</b>	888
<b>95%</b>	672
<b>90%</b>	576
<b>75% Q3</b>	509
<b>50% Median</b>	380
<b>25% Q1</b>	280
<b>10%</b>	180
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

**The UNIVARIATE Procedure**  
**Variable: GarageArea**

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	380	884	280
0	348	888	192
0	347	902	219
0	325	968	351
0	311	1418	339

**The UNIVARIATE Procedure**  
**Variable: WoodDeckSF**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	60.7885117	<b>Sum Observations</b>	23282
<b>Std Deviation</b>	111.006272	<b>Variance</b>	12322.3923
<b>Skewness</b>	2.17044574	<b>Kurtosis</b>	5.58864419
<b>Uncorrected SS</b>	6122432	<b>Corrected SS</b>	4707153.87
<b>Coeff Variation</b>	182.610609	<b>Std Error Mean</b>	5.67215551

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	60.78851	<b>Std Deviation</b>	111.00627
<b>Median</b>	0.00000	<b>Variance</b>	12322
<b>Mode</b>	0.00000	<b>Range</b>	736.00000
		<b>Interquartile Range</b>	100.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
Student's t	t	10.717	Pr >  t	<.0001
Sign	M	61	Pr >=  M	<.0001
Signed Rank	S	3751.5	Pr >=  S	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	736
<b>99%</b>	426
<b>95%</b>	301
<b>90%</b>	224
<b>75% Q3</b>	100
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

**The UNIVARIATE Procedure**  
**Variable: WoodDeckSF**

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	381	390	166
0	378	426	182
0	377	509	250
0	376	586	372
0	375	736	383

**The UNIVARIATE Procedure**  
**Variable: OpenPorchSF**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	30.0339426	<b>Sum Observations</b>	11503
<b>Std Deviation</b>	60.9447986	<b>Variance</b>	3714.26848
<b>Skewness</b>	2.96239426	<b>Kurtosis</b>	10.1586663
<b>Uncorrected SS</b>	1764331	<b>Corrected SS</b>	1418850.56
<b>Coeff Variation</b>	202.919742	<b>Std Error Mean</b>	3.11413374

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	30.03394	<b>Std Deviation</b>	60.94480
<b>Median</b>	0.00000	<b>Variance</b>	3714
<b>Mode</b>	0.00000	<b>Range</b>	406.00000
		<b>Interquartile Range</b>	40.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	9.644397	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	66	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	4389	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	406
<b>99%</b>	312
<b>95%</b>	140
<b>90%</b>	100
<b>75% Q3</b>	40
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

**The UNIVARIATE Procedure**  
**Variable: OpenPorchSF**

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	382	292	339
0	377	312	170
0	375	312	205
0	370	319	257
0	369	406	131

**The UNIVARIATE Procedure**  
**Variable: EnclosedPorch**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	24.308094	<b>Sum Observations</b>	9310
<b>Std Deviation</b>	64.5955124	<b>Variance</b>	4172.58022
<b>Skewness</b>	3.34475409	<b>Kurtosis</b>	14.8052558
<b>Uncorrected SS</b>	1820234	<b>Corrected SS</b>	1593925.64
<b>Coeff Variation</b>	265.736641	<b>Std Error Mean</b>	3.3006765

Basic Statistical Measures				
Location		Variability		
<b>Mean</b>	24.30809	<b>Std Deviation</b>	64.59551	
<b>Median</b>	0.00000	<b>Variance</b>		4173
<b>Mode</b>	0.00000	<b>Range</b>	552.00000	
		<b>Interquartile Range</b>		0

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	7.364579	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	31	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	976.5	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	552
<b>99%</b>	268
<b>95%</b>	180
<b>90%</b>	116
<b>75% Q3</b>	0
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: EnclosedPorch

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	383	252	288
0	381	268	80
0	380	275	207
0	379	286	348
0	378	552	53

**The UNIVARIATE Procedure**  
**Variable: 3SsnPorch**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	3.05221932	<b>Sum Observations</b>	1169
<b>Std Deviation</b>	27.2220343	<b>Variance</b>	741.039151
<b>Skewness</b>	11.0365086	<b>Kurtosis</b>	140.771605
<b>Uncorrected SS</b>	286645	<b>Corrected SS</b>	283076.956
<b>Coeff Variation</b>	891.876744	<b>Std Error Mean</b>	1.39098097

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	3.052219	<b>Std Deviation</b>	27.22203
<b>Median</b>	0.000000	<b>Variance</b>	741.03915
<b>Mode</b>	0.000000	<b>Range</b>	407.00000
		<b>Interquartile Range</b>	0

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	2.194293	<b>Pr &gt;  t </b>	0.0288
<b>Sign</b>	<b>M</b>	3	<b>Pr &gt;=  M </b>	0.0313
<b>Signed Rank</b>	<b>S</b>	10.5	<b>Pr &gt;=  S </b>	0.0313

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	407
<b>99%</b>	162
<b>95%</b>	0
<b>90%</b>	0
<b>75% Q3</b>	0
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: 3SsnPorch

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	383	144	140
0	382	162	228
0	381	180	34
0	380	180	49
0	379	407	17

**The UNIVARIATE Procedure**  
**Variable: ScreenPorch**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	19.926893	<b>Sum Observations</b>	7632
<b>Std Deviation</b>	59.7187552	<b>Variance</b>	3566.32972
<b>Skewness</b>	3.13251011	<b>Kurtosis</b>	9.60520492
<b>Uncorrected SS</b>	1514420	<b>Corrected SS</b>	1362337.95
<b>Coeff Variation</b>	299.689246	<b>Std Error Mean</b>	3.05148584

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	19.92689	<b>Std Deviation</b>	59.71876
<b>Median</b>	0.00000	<b>Variance</b>	3566
<b>Mode</b>	0.00000	<b>Range</b>	385.00000
		<b>Interquartile Range</b>	0

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	6.530226	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	22	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	495	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	385
<b>99%</b>	273
<b>95%</b>	176
<b>90%</b>	120
<b>75% Q3</b>	0
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

**The UNIVARIATE Procedure**  
**Variable: ScreenPorch**

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	383	265	226
0	382	273	300
0	381	287	172
0	380	288	303
0	379	385	161

**The UNIVARIATE Procedure**  
**Variable: PoolArea**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	4.51697128	<b>Sum Observations</b>	1730
<b>Std Deviation</b>	51.9104555	<b>Variance</b>	2694.69539
<b>Skewness</b>	11.904021	<b>Kurtosis</b>	145.983355
<b>Uncorrected SS</b>	1037188	<b>Corrected SS</b>	1029373.64
<b>Coeff Variation</b>	1149.23147	<b>Std Error Mean</b>	2.65250037

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	4.516971	<b>Std Deviation</b>	51.91046
<b>Median</b>	0.000000	<b>Variance</b>	2695
<b>Mode</b>	0.000000	<b>Range</b>	738.00000
		<b>Interquartile Range</b>	0

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	1.702911	<b>Pr &gt;  t </b>	0.0894
<b>Sign</b>	<b>M</b>	1.5	<b>Pr &gt;=  M </b>	0.2500
<b>Signed Rank</b>	<b>S</b>	3	<b>Pr &gt;=  S </b>	0.2500

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	738
<b>99%</b>	0
<b>95%</b>	0
<b>90%</b>	0
<b>75% Q3</b>	0
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: PoolArea

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	383	0	382
0	382	0	383
0	381	480	339
0	380	512	53
0	379	738	372

**The UNIVARIATE Procedure**  
**Variable: MiscVal**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	78.5900783	<b>Sum Observations</b>	30100
<b>Std Deviation</b>	815.08076	<b>Variance</b>	664356.646
<b>Skewness</b>	17.9176431	<b>Kurtosis</b>	337.936892
<b>Uncorrected SS</b>	256149800	<b>Corrected SS</b>	253784239
<b>Coeff Variation</b>	1037.12934	<b>Std Error Mean</b>	41.6486813

Basic Statistical Measures				
Location		Variability		
<b>Mean</b>	78.59008	<b>Std Deviation</b>	815.08076	
<b>Median</b>	0.00000	<b>Variance</b>	664357	
<b>Mode</b>	0.00000	<b>Range</b>	15500	
		<b>Interquartile Range</b>	0	

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	1.886976	<b>Pr &gt;  t </b>	0.0599
<b>Sign</b>	<b>M</b>	10	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	105	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	15500
<b>99%</b>	1400
<b>95%</b>	400
<b>90%</b>	0
<b>75% Q3</b>	0
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

**The UNIVARIATE Procedure**  
**Variable: MiscVal**

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	383	1200	100
0	382	1400	303
0	381	2000	127
0	380	2000	229
0	379	15500	86

**The UNIVARIATE Procedure**  
**Variable: MoSold**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	6.25587467	<b>Sum Observations</b>	2396
<b>Std Deviation</b>	2.58009105	<b>Variance</b>	6.65686985
<b>Skewness</b>	0.25549973	<b>Kurtosis</b>	-0.2322768
<b>Uncorrected SS</b>	17532	<b>Corrected SS</b>	2542.92428
<b>Coeff Variation</b>	41.2426909	<b>Std Error Mean</b>	0.13183649

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	6.255875	<b>Std Deviation</b>	2.58009
<b>Median</b>	6.000000	<b>Variance</b>	6.65687
<b>Mode</b>	7.000000	<b>Range</b>	11.00000
		<b>Interquartile Range</b>	2.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	47.45177	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36768	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	12
<b>99%</b>	12
<b>95%</b>	11
<b>90%</b>	10
<b>75% Q3</b>	7
<b>50% Median</b>	6
<b>25% Q1</b>	5
<b>10%</b>	3
<b>5%</b>	2
<b>1%</b>	1
<b>0% Min</b>	1

The UNIVARIATE Procedure  
Variable: MoSold

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
1	339	12	249
1	313	12	316
1	265	12	337
1	257	12	347
1	234	12	364

**The UNIVARIATE Procedure**  
**Variable: YrSold**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	2007.8564	<b>Sum Observations</b>	769009
<b>Std Deviation</b>	1.31154941	<b>Variance</b>	1.72016185
<b>Skewness</b>	0.04341412	<b>Kurtosis</b>	-1.1427839
<b>Uncorrected SS</b>	1544060297	<b>Corrected SS</b>	657.101828
<b>Coeff Variation</b>	0.06532088	<b>Std Error Mean</b>	0.06701704

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	2007.856	<b>Std Deviation</b>	1.31155
<b>Median</b>	2008.000	<b>Variance</b>	1.72016
<b>Mode</b>	2008.000	<b>Range</b>	4.00000
		<b>Interquartile Range</b>	2.00000

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	29960.38	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36768	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	2010
<b>99%</b>	2010
<b>95%</b>	2010
<b>90%</b>	2010
<b>75% Q3</b>	2009
<b>50% Median</b>	2008
<b>25% Q1</b>	2007
<b>10%</b>	2006
<b>5%</b>	2006
<b>1%</b>	2006
<b>0% Min</b>	2006

The UNIVARIATE Procedure  
Variable: YrSold

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
2006	381	2010	334
2006	372	2010	340
2006	364	2010	355
2006	341	2010	359
2006	338	2010	382

**The UNIVARIATE Procedure**  
**Variable: SalePrice**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	138062.501	<b>Sum Observations</b>	52877938
<b>Std Deviation</b>	38156.2003	<b>Variance</b>	1455895625
<b>Skewness</b>	1.20725804	<b>Kurtosis</b>	4.05543242
<b>Uncorrected SS</b>	7.85661E12	<b>Corrected SS</b>	5.56152E11
<b>Coeff Variation</b>	27.6369036	<b>Std Error Mean</b>	1949.69076

Basic Statistical Measures				
Location		Variability		
<b>Mean</b>		138062.5	<b>Std Deviation</b>	38156
<b>Median</b>		135500.0	<b>Variance</b>	1455895625
<b>Mode</b>		140000.0	<b>Range</b>	305700
			<b>Interquartile Range</b>	39000

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	70.81251	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	191.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	36768	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	345000
<b>99%</b>	268000
<b>95%</b>	207000
<b>90%</b>	180500
<b>75% Q3</b>	155000
<b>50% Median</b>	135500
<b>25% Q1</b>	116000
<b>10%</b>	97000
<b>5%</b>	82500
<b>1%</b>	60000
<b>0% Min</b>	39300

The UNIVARIATE Procedure  
Variable: SalePrice

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
39300	136	244000	322
52000	186	268000	227
58500	359	274970	372
60000	167	320000	190
60000	104	345000	169

**The UNIVARIATE Procedure**  
**Variable: N\_Dummy**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	0.58746736	<b>Sum Observations</b>	225
<b>Std Deviation</b>	0.49293395	<b>Variance</b>	0.24298388
<b>Skewness</b>	-0.3567476	<b>Kurtosis</b>	-1.8825894
<b>Uncorrected SS</b>	225	<b>Corrected SS</b>	92.8198433
<b>Coeff Variation</b>	83.9083131	<b>Std Error Mean</b>	0.02518775

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	0.587467	<b>Std Deviation</b>	0.49293
<b>Median</b>	1.000000	<b>Variance</b>	0.24298
<b>Mode</b>	1.000000	<b>Range</b>	1.00000
		<b>Interquartile Range</b>	1.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	23.32354	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	112.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	12712.5	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	1
<b>99%</b>	1
<b>95%</b>	1
<b>90%</b>	1
<b>75% Q3</b>	1
<b>50% Median</b>	1
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: N\_Dummy

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	383	1	375
0	381	1	376
0	379	1	377
0	378	1	380
0	372	1	382

**The UNIVARIATE Procedure**  
**Variable: E\_Dummy**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	0.26109661	<b>Sum Observations</b>	100
<b>Std Deviation</b>	0.43980701	<b>Variance</b>	0.19343021
<b>Skewness</b>	1.09210392	<b>Kurtosis</b>	-0.8115744
<b>Uncorrected SS</b>	100	<b>Corrected SS</b>	73.8903394
<b>Coeff Variation</b>	168.446086	<b>Std Error Mean</b>	0.02247309

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	0.261097	<b>Std Deviation</b>	0.43981
<b>Median</b>	0.000000	<b>Variance</b>	0.19343
<b>Mode</b>	0.000000	<b>Range</b>	1.00000
		<b>Interquartile Range</b>	1.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	11.61819	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	50	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	2525	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	1
<b>99%</b>	1
<b>95%</b>	1
<b>90%</b>	1
<b>75% Q3</b>	1
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: E\_Dummy

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	382	1	361
0	380	1	372
0	378	1	379
0	377	1	381
0	376	1	383

**The UNIVARIATE Procedure**  
**Variable: int\_e**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	349.879896	<b>Sum Observations</b>	134004
<b>Std Deviation</b>	677.201893	<b>Variance</b>	458602.404
<b>Skewness</b>	2.77896653	<b>Kurtosis</b>	13.2038298
<b>Uncorrected SS</b>	222071424	<b>Corrected SS</b>	175186118
<b>Coeff Variation</b>	193.552674	<b>Std Error Mean</b>	34.6034003

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	349.8799	<b>Std Deviation</b>	677.20189
<b>Median</b>	0.0000	<b>Variance</b>	458602
<b>Mode</b>	0.0000	<b>Range</b>	5642
		<b>Interquartile Range</b>	796.00000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	10.11114	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	50	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	2525	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	5642
<b>99%</b>	2200
<b>95%</b>	1656
<b>90%</b>	1346
<b>75% Q3</b>	796
<b>50% Median</b>	0
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: int\_e

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	382	2158	48
0	380	2200	238
0	378	2201	372
0	377	4676	131
0	376	5642	339

**The UNIVARIATE Procedure**  
**Variable: int\_n**

Moments			
<b>N</b>	383	<b>Sum Weights</b>	383
<b>Mean</b>	769.765013	<b>Sum Observations</b>	294820
<b>Std Deviation</b>	719.33561	<b>Variance</b>	517443.72
<b>Skewness</b>	0.34400241	<b>Kurtosis</b>	-0.7607225
<b>Uncorrected SS</b>	424605622	<b>Corrected SS</b>	197663501
<b>Coeff Variation</b>	93.4487275	<b>Std Error Mean</b>	36.7563326

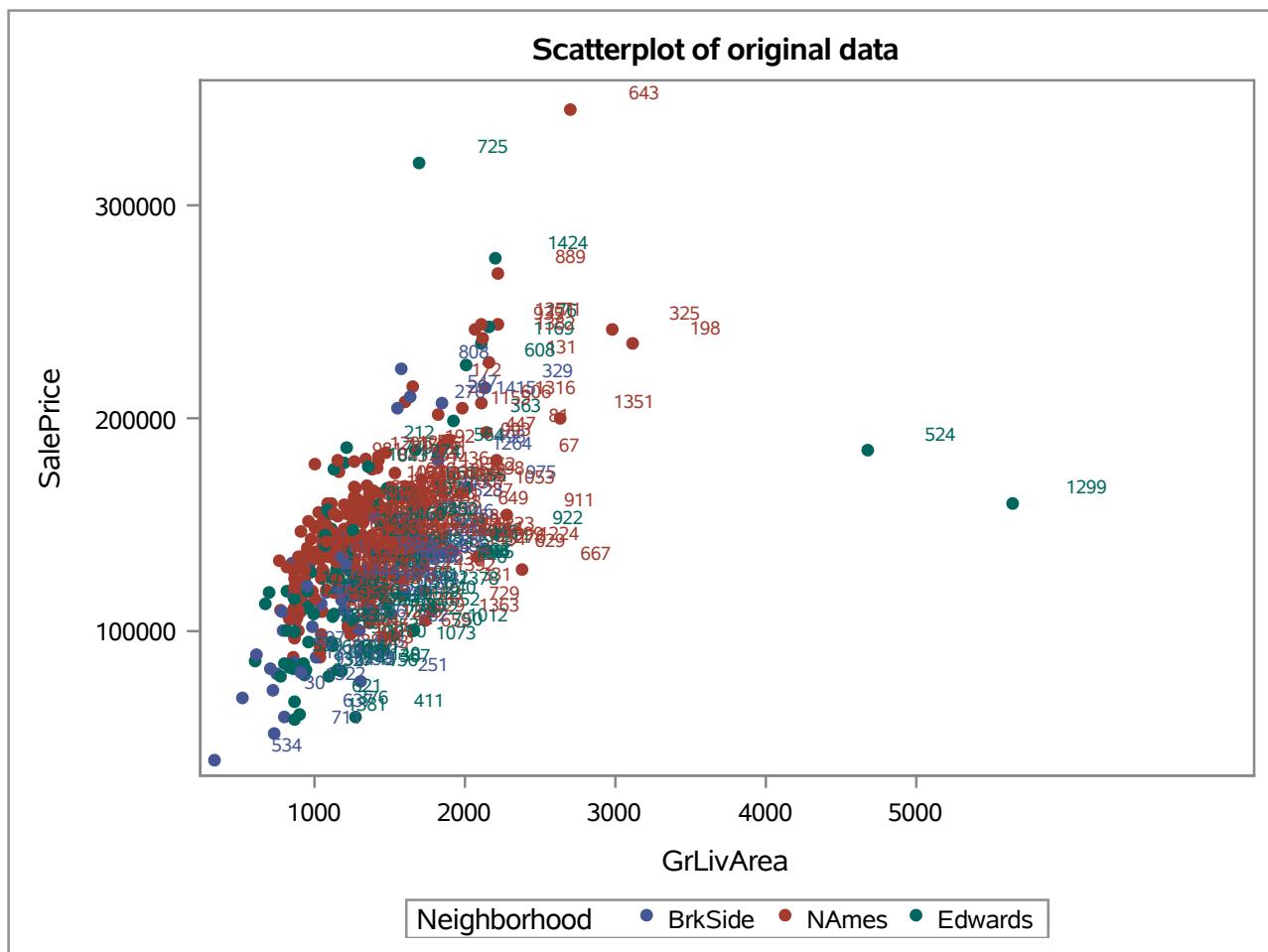
Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	769.7650	<b>Std Deviation</b>	719.33561
<b>Median</b>	925.0000	<b>Variance</b>	517444
<b>Mode</b>	0.0000	<b>Range</b>	3112
		<b>Interquartile Range</b>	1268

Tests for Location: Mu0=0				
Test		Statistic		p Value
<b>Student's t</b>	<b>t</b>	20.94238	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	112.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	12712.5	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	3112
<b>99%</b>	2634
<b>95%</b>	1920
<b>90%</b>	1668
<b>75% Q3</b>	1268
<b>50% Median</b>	925
<b>25% Q1</b>	0
<b>10%</b>	0
<b>5%</b>	0
<b>1%</b>	0
<b>0% Min</b>	0

The UNIVARIATE Procedure  
Variable: int\_n

Extreme Observations			
Lowest		Highest	
Value	Obs	Value	Obs
0	383	2380	180
0	381	2634	351
0	379	2704	169
0	378	2978	78
0	372	3112	53



Obs	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	LotConfig
1	10	190	RL	50	7420	Pave	NA	Reg	Lvl	AllPub	Corner
2	15	20	RL	NA	10920	Pave	NA	IR1	Lvl	AllPub	Corner

Obs	LandSlope	Neighborhood	Condition1	Condition2	BldgType	HouseStyle	OverallQual	OverallCond	YearBuilt
1	Gtl	BrkSide	Artery	Artery	2fmCon	1.5Unf	5	6	1939
2	Gtl	NAmes	Norm	Norm	1Fam	1Story	6	5	1960

Obs	YearRemodAdd	RoofStyle	RoofMatl	Exterior1st	Exterior2nd	MasVnrType	MasVnrArea	ExterQual	ExterCond
1	1950	Gable	CompShg	MetalSd	MetalSd	None	0	TA	TA
2	1960	Hip	CompShg	MetalSd	MetalSd	BrkFace	212	TA	TA

Obs	Foundation	BsmtQual	BsmtCond	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2	BsmtFinSF2	BsmtUnfSF
1	BrkTil	TA	TA	No	GLQ	851	Unf	0	140
2	CBlock	TA	TA	No	BLQ	733	Unf	0	520

Obs	TotalBsmtSF	Heating	HeatingQC	CentralAir	Electrical	1stFlrSF	2ndFlrSF	LowQualFinSF	GrLivArea	BsmtFullBath
1	991	GasA	Ex	Y	SBrkr	1077	0	0	1077	1
2	1253	GasA	TA	Y	SBrkr	1253	0	0	1253	1

Obs	BsmtHalfBath	FullBath	HalfBath	BedroomAbvGr	KitchenAbvGr	KitchenQual	TotRmsAbvGrd	Functional	Fireplaces
1	0	1	0	2	2	TA	5	Typ	2
2	0	1	1	2	1	TA	5	Typ	1

Obs	FireplaceQu	GarageType	GarageYrBlt	GarageFinish	GarageCars	GarageArea	GarageQual	GarageCond	PavedDrive
1	TA	Attchd	1939	RFn	1	205	Gd	TA	Y
2	Fa	Attchd	1960	RFn	1	352	TA	TA	Y

Obs	WoodDeckSF	OpenPorchSF	EnclosedPorch	3SsnPorch	ScreenPorch	PoolArea	PoolQC	Fence	MiscFeature	MiscVal
1	0	4	0	0	0	0	NA	NA	NA	0
2	0	213	176	0	0	0	NA	GdWo	NA	0

Obs	MoSold	YrSold	SaleType	SaleCondition	SalePrice	N_Dummy	E_Dummy	int_e	int_n
1	1	2008	WD	Normal	118000	0	0	0	0
2	5	2008	WD	Normal	157000	1	0	0	1253

Obs	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	LotConfig
3	16	45	RM	51	6120	Pave	NA	Reg	Lvl	AllPub	Corner
4	17	20	RL	NA	11241	Pave	NA	IR1	Lvl	AllPub	CulDSac

Obs	LandSlope	Neighborhood	Condition1	Condition2	BldgType	HouseStyle	OverallQual	OverallCond	YearBuilt
3	Gtl	BrkSide	Norm	Norm	1Fam	1.5Unf	7	8	1929
4	Gtl	NAmes	Norm	Norm	1Fam	1Story	6	7	1970

Obs	YearRemodAdd	RoofStyle	RoofMatl	Exterior1st	Exterior2nd	MasVnrType	MasVnrArea	ExterQual	ExterCond
3	2001	Gable	CompShg	Wd Sdng	Wd Sdng	None	0	TA	TA
4	1970	Gable	CompShg	Wd Sdng	Wd Sdng	BrkFace	180	TA	TA

Obs	Foundation	BsmtQual	BsmtCond	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2	BsmtFinSF2	BsmtUnfSF
3	BrkTil	TA	TA	No	Unf	0	Unf	0	832
4	CBlock	TA	TA	No	ALQ	578	Unf	0	426

Obs	TotalBsmtSF	Heating	HeatingQC	CentralAir	Electrical	1stFlrSF	2ndFlrSF	LowQualFinSF	GrLivArea	BsmtFullBath
3	832	GasA	Ex	Y	FuseA	854	0	0	854	0
4	1004	GasA	Ex	Y	SBrkr	1004	0	0	1004	1

Obs	BsmtHalfBath	FullBath	HalfBath	BedroomAbvGr	KitchenAbvGr	KitchenQual	TotRmsAbvGrd	Functional	Fireplaces
3	0	1	0	2	1	TA	5	Typ	0
4	0	1	0	2	1	TA	5	Typ	1

Obs	FireplaceQu	GarageType	GarageYrBlt	GarageFinish	GarageCars	GarageArea	GarageQual	GarageCond	PavedDrive
3	NA	Detchd	1991	Unf	2	576	TA	TA	Y
4	TA	Attchd	1970	Fin	2	480	TA	TA	Y

Obs	WoodDeckSF	OpenPorchSF	EnclosedPorch	3SsnPorch	ScreenPorch	PoolArea	PoolQC	Fence	MiscFeature	MiscVal
3	48	112	0	0	0	0	NA	GdPrv	NA	0
4	0	0	0	0	0	0	NA	NA	Shed	700

Obs	MoSold	YrSold	SaleType	SaleCondition	SalePrice	N_Dummy	E_Dummy	int_e	int_n
3	7	2007	WD	Normal	132000	0	0	0	0
4	3	2010	WD	Normal	149000	1	0	0	1004

Obs	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	LotConfig
5	20	20	RL	70	7560	Pave	NA	Reg	Lvl	AllPub	Inside
6	27	20	RL	60	7200	Pave	NA	Reg	Lvl	AllPub	Corner

Obs	LandSlope	Neighborhood	Condition1	Condition2	BldgType	HouseStyle	OverallQual	OverallCond	YearBuilt
5	Gtl	NAmes	Norm	Norm	1Fam	1Story	5	6	1958
6	Gtl	NAmes	Norm	Norm	1Fam	1Story	5	7	1951

Obs	YearRemodAdd	RoofStyle	RoofMatl	Exterior1st	Exterior2nd	MasVnrType	MasVnrArea	ExterQual	ExterCond
5	1965	Hip	CompShg	BrkFace	Plywood	None	0	TA	TA
6	2000	Gable	CompShg	Wd Sdng	Wd Sdng	None	0	TA	TA

Obs	Foundation	BsmtQual	BsmtCond	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2	BsmtFinSF2	BsmtUnfSF
5	CBlock	TA	TA	No	LwQ	504	Unf	0	525
6	CBlock	TA	TA	Mn	BLQ	234	Rec	486	180

Obs	TotalBsmtSF	Heating	HeatingQC	CentralAir	Electrical	1stFlrSF	2ndFlrSF	LowQualFinSF	GrLivArea	BsmtFullBath
5	1029	GasA	TA	Y	SBrkr	1339	0	0	1339	0
6	900	GasA	TA	Y	SBrkr	900	0	0	900	0

Obs	BsmtHalfBath	FullBath	HalfBath	BedroomAbvGr	KitchenAbvGr	KitchenQual	TotRmsAbvGrd	Functional	Fireplaces
5	0	1	0	3	1	TA	6	Min1	0
6	1	1	0	3	1	Gd	5	Typ	0

Obs	FireplaceQu	GarageType	GarageYrBlt	GarageFinish	GarageCars	GarageArea	GarageQual	GarageCond	PavedDrive
5	NA	Attchd	1958	Unf	1	294	TA	TA	Y
6	NA	Detchd	2005	Unf	2	576	TA	TA	Y

Obs	WoodDeckSF	OpenPorchSF	EnclosedPorch	3SsnPorch	ScreenPorch	PoolArea	PoolQC	Fence	MiscFeature	MiscVal
5	0	0	0	0	0	0	NA	MnPrv	NA	0
6	222	32	0	0	0	0	NA	NA	NA	0

Obs	MoSold	YrSold	SaleType	SaleCondition	SalePrice	N_Dummy	E_Dummy	int_e	int_n
5	5	2009	COD	Abnorml	139000	1	0	0	1339
6	5	2010	WD	Normal	134800	1	0	0	900

Obs	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	LotConfig
7	29	20	RL	47	16321	Pave	NA	IR1	Lvl	AllPub	CulDSac
8	30	30	RM	60	6324	Pave	NA	IR1	Lvl	AllPub	Inside

Obs	LandSlope	Neighborhood	Condition1	Condition2	BldgType	HouseStyle	OverallQual	OverallCond	YearBuilt
7	Gtl	NAmes	Norm	Norm	1Fam	1Story	5	6	1957
8	Gtl	BrkSide	Feedr	RRNn	1Fam	1Story	4	6	1927

Obs	YearRemodAdd	RoofStyle	RoofMatl	Exterior1st	Exterior2nd	MasVnrType	MasVnrArea	ExterQual	ExterCond
7	1997	Gable	CompShg	MetalSd	MetalSd	None	0	TA	TA
8	1950	Gable	CompShg	MetalSd	MetalSd	None	0	TA	TA

Obs	Foundation	BsmtQual	BsmtCond	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2	BsmtFinSF2	BsmtUnfSF
7	CBlock	TA	TA	Gd	BLQ	1277	Unf	0	207
8	BrkTil	TA	TA	No	Unf	0	Unf	0	520

Obs	TotalBsmtSF	Heating	HeatingQC	CentralAir	Electrical	1stFlrSF	2ndFlrSF	LowQualFinSF	GrLivArea	BsmtFullBath
7	1484	GasA	TA	Y	SBrkr	1600	0	0	1600	1
8	520	GasA	Fa	N	SBrkr	520	0	0	520	0

Obs	BsmtHalfBath	FullBath	HalfBath	BedroomAbvGr	KitchenAbvGr	KitchenQual	TotRmsAbvGrd	Functional	Fireplaces
7	0	1	0	2	1	TA	6	Typ	2
8	0	1	0	1	1	Fa	4	Typ	0

Obs	FireplaceQu	GarageType	GarageYrBlt	GarageFinish	GarageCars	GarageArea	GarageQual	GarageCond	PavedDrive
7	Gd	Attchd	1957	RFn	1	319	TA	TA	Y
8	NA	Detchd	1920	Unf	1	240	Fa	TA	Y

Obs	WoodDeckSF	OpenPorchSF	EnclosedPorch	3SsnPorch	ScreenPorch	PoolArea	PoolQC	Fence	MiscFeature	MiscVal
7	288	258	0	0	0	0	NA	NA	NA	0
8	49	0	87	0	0	0	NA	NA	NA	0

Obs	MoSold	YrSold	SaleType	SaleCondition	SalePrice	N_Dummy	E_Dummy	int_e	int_n
7	12	2006	WD	Normal	207500	1	0	0	1600
8	5	2008	WD	Normal	68500	0	0	0	0

Obs	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	LotConfig
9	34	20	RL	70	10552	Pave	NA	IR1	Lvl	AllPub	Inside
10	38	20	RL	74	8532	Pave	NA	Reg	Lvl	AllPub	Inside

Obs	LandSlope	Neighborhood	Condition1	Condition2	BldgType	HouseStyle	OverallQual	OverallCond	YearBuilt
9	Gtl	NAmes	Norm	Norm	1Fam	1Story	5	5	1959
10	Gtl	NAmes	Norm	Norm	1Fam	1Story	5	6	1954

Obs	YearRemodAdd	RoofStyle	RoofMatl	Exterior1st	Exterior2nd	MasVnrType	MasVnrArea	ExterQual	ExterCond
9	1959	Hip	CompShg	BrkFace	BrkFace	None	0	TA	TA
10	1990	Hip	CompShg	Wd Sdng	Wd Sdng	BrkFace	650	TA	TA

Obs	Foundation	BsmtQual	BsmtCond	BsmtExposure	BsmtFinType1	BsmtFinSF1	BsmtFinType2	BsmtFinSF2	BsmtUnfSF
9	CBlock	TA	TA	No	Rec	1018	Unf	0	380
10	CBlock	TA	TA	No	Rec	1213	Unf	0	84

Obs	TotalBsmtSF	Heating	HeatingQC	CentralAir	Electrical	1stFlrSF	2ndFlrSF	LowQualFinSF	GrLivArea	BsmtFullBath
9	1398	GasA	Gd	Y	SBrkr	1700	0	0	1700	0
10	1297	GasA	Gd	Y	SBrkr	1297	0	0	1297	0

Obs	BsmtHalfBath	FullBath	HalfBath	BedroomAbvGr	KitchenAbvGr	KitchenQual	TotRmsAbvGrd	Functional	Fireplaces
9	1	1	1	4	1	Gd	6	Typ	1
10	1	1	0	3	1	TA	5	Typ	1

Obs	FireplaceQu	GarageType	GarageYrBlt	GarageFinish	GarageCars	GarageArea	GarageQual	GarageCond	PavedDrive
9	Gd	Attchd	1959	RFn	2	447	TA	TA	Y
10	TA	Attchd	1954	Fin	2	498	TA	TA	Y

Obs	WoodDeckSF	OpenPorchSF	EnclosedPorch	3SsnPorch	ScreenPorch	PoolArea	PoolQC	Fence	MiscFeature	MiscVal
9	0	38	0	0	0	0	NA	NA	NA	0
10	0	0	0	0	0	0	NA	NA	NA	0

Obs	MoSold	YrSold	SaleType	SaleCondition	SalePrice	N_Dummy	E_Dummy	int_e	int_n
9	4	2010	WD	Normal	165500	1	0	0	1700
10	10	2009	WD	Normal	153000	1	0	0	1297

**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Number of Observations Read	383
Number of Observations Used	383

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
<b>Model</b>	5	2.48809E11	49761808941	61.04	<.0001
<b>Error</b>	377	3.073431E11	815233644		
<b>Corrected Total</b>	382	5.561521E11			

Root MSE	28552	R-Square	0.4474
Dependent Mean	138063	Adj R-Sq	0.4400
Coeff Var	20.68070		

Parameter Estimates								
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr >  t	Variance Inflation	95% Confidence Limits	
<b>Intercept</b>	1	19972	12351	1.62	0.1067	0	-4314.21151	44257
<b>GrLivArea</b>	1	87.16253	9.78196	8.91	<.0001	10.56925	67.92850	106.39657
<b>E_Dummy</b>	1	68382	13970	4.90	<.0001	17.68756	40914	95850
<b>N_Dummy</b>	1	54705	13882	3.94	<.0001	21.94238	27408	82001
<b>int_e</b>	1	-57.41223	10.71767	-5.36	<.0001	24.68414	-78.48612	-36.33834
<b>int_n</b>	1	-32.84667	10.81538	-3.04	0.0026	28.36139	-54.11269	-11.58065

**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
1	10	118000	113846	3947	106085	121606	4154	28278	0.147	0.000
2	15	157000	142734	1922	138955	146513	14266	28488	0.501	0.000
3	16	132000	94408	5071	84437	104379	37592	28098	1.338	0.010
4	17	149000	129210	2371	124548	133871	19790	28454	0.696	0.001
5	20	139000	147405	1908	143654	151157	-8405	28488	-0.295	0.000
6	27	134800	123561	2685	118282	128839	11239	28426	0.395	0.000
7	29	207500	161582	2326	157009	166155	45918	28457	1.614	0.003
8	30	68500	65296	7662	50231	80361	3204	27505	0.116	0.000
9	34	165500	167013	2618	161865	172162	-1513	28432	-0.053	0.000
10	38	153000	145124	1904	141379	148869	7876	28489	0.276	0.000
11	39	109000	132088	2234	127696	136480	-23088	28465	-0.811	0.001
12	40	82000	122625	2972	116782	128468	-40625	28397	-1.431	0.004
13	41	160000	146591	1905	142846	150335	13409	28489	0.471	0.000
14	45	141000	137140	2042	133124	141155	3860	28479	0.136	0.000
15	52	114500	122475	3758	115085	129865	-7975	28304	-0.282	0.000
16	55	130000	148546	1917	144776	152316	-18546	28488	-0.651	0.000
17	56	180500	152077	1976	148192	155961	28423	28484	0.998	0.001
18	67	180000	194552	4554	185597	203506	-14552	28187	-0.516	0.001
19	71	244000	195421	4621	186334	204507	48579	28176	1.724	0.013
20	74	144900	133663	2167	129403	137924	11237	28470	0.395	0.000
21	77	135750	126385	2521	121428	131342	9365	28441	0.329	0.000
22	78	127000	131975	3834	124437	139514	-4975	28294	-0.176	0.000
23	81	193500	191021	4283	182599	199443	2479	28229	0.088	0.000
24	84	126500	132523	2215	128168	136877	-6023	28466	-0.212	0.000
25	91	109900	131165	2276	126690	135639	-21265	28461	-0.747	0.001
26	92	98600	141756	1935	137952	145561	-43156	28487	-1.515	0.002
27	98	94750	116913	3305	110415	123412	-22163	28360	-0.781	0.001
28	99	83000	113195	3612	106093	120296	-30195	28323	-1.066	0.003
29	100	128950	141213	1944	137391	145035	-12263	28486	-0.431	0.000
30	111	136900	143540	3639	136386	150694	-6640	28320	-0.234	0.000
31	118	155000	121822	3007	115910	127734	33178	28394	1.168	0.003
32	123	136000	133338	2180	129051	137624	2662	28469	0.094	0.000

**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
33	129	155000	147894	1911	144136	151653	7106	28488	0.249	0.000
34	130	150000	131871	2243	127460	136282	18129	28464	0.637	0.000
35	131	226000	191836	4345	183291	200380	34164	28220	1.211	0.006
36	133	150750	146754	1905	143008	150499	3996	28489	0.140	0.000
37	137	143000	140616	1955	136772	144459	2384	28485	0.084	0.000
38	141	115000	121605	2804	116092	127119	-6605	28414	-0.232	0.000
39	143	166000	149904	1934	146100	153707	16096	28487	0.565	0.000
40	146	130000	139196	3281	132745	145647	-9196	28363	-0.324	0.000
41	147	105000	96239	4935	86535	105942	8761	28123	0.312	0.000
42	150	115000	137118	3995	129264	144972	-22118	28271	-0.782	0.002
43	156	79000	120959	3049	114965	126954	-41959	28389	-1.478	0.004
44	157	109500	131165	2276	126690	135639	-21665	28461	-0.761	0.001
45	166	127500	128665	2856	123049	134280	-1165	28409	-0.041	0.000
46	172	215000	164623	2483	159741	169506	50377	28444	1.771	0.004
47	174	163000	148655	1918	144883	152427	14345	28488	0.504	0.000
48	176	243000	152554	4581	143547	161562	90446	28182	3.209	0.045
49	183	120000	128219	2855	122604	133833	-8219	28409	-0.289	0.000
50	185	127000	129099	3780	121667	136531	-2099	28301	-0.074	0.000
51	192	184000	155010	2056	150966	159053	28990	28478	1.018	0.001
52	194	130000	139196	3281	132745	145647	-9196	28363	-0.324	0.000
53	198	235000	243707	8527	226940	260475	-8707	27249	-0.320	0.002
54	201	140000	121703	3012	115781	127626	18297	28393	0.644	0.001
55	208	141000	134424	2137	130223	138625	6576	28472	0.231	0.000
56	210	145000	133989	2154	129755	138224	11011	28471	0.387	0.000
57	211	98000	114057	3535	107106	121009	-16057	28333	-0.567	0.001
58	212	186000	124410	2910	118689	130132	61590	28404	2.168	0.008
59	216	134450	141811	1934	138008	145614	-7361	28487	-0.258	0.000
60	224	97000	121605	2804	116092	127119	-24605	28414	-0.866	0.001
61	231	148000	139530	1978	135641	143418	8470	28484	0.297	0.000
62	240	113000	132592	2927	126837	138347	-19592	28402	-0.690	0.001
63	248	140000	149361	1927	145572	153149	-9361	28487	-0.329	0.000
64	251	76500	133806	3882	126173	141439	-57306	28287	-2.026	0.013

**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
65	254	158000	145396	1904	141652	149139	12604	28489	0.442	0.000
66	255	145000	146047	1904	142305	149790	-1047	28489	-0.037	0.000
67	261	176000	149741	1932	145942	153540	26259	28487	0.922	0.001
68	270	148000	121465	3023	115520	127410	26535	28392	0.935	0.002
69	274	139000	163320	2414	158574	168066	-24320	28450	-0.855	0.001
70	276	205000	154899	5044	144982	164817	50101	28103	1.783	0.017
71	287	159000	168860	2728	163495	174225	-9860	28422	-0.347	0.000
72	288	88000	121279	2825	115726	126833	-33279	28412	-1.171	0.002
73	290	153575	141650	4197	133397	149903	11925	28242	0.422	0.001
74	293	131000	139405	3296	132924	145885	-8405	28361	-0.296	0.000
75	295	167000	163972	2448	159158	168785	3028	28447	0.106	0.000
76	309	82500	113968	3543	107001	120935	-31468	28332	-1.111	0.003
77	312	132000	127471	2462	122631	132312	4529	28446	0.159	0.000
78	325	242000	236429	7926	220844	252014	5571	27430	0.203	0.001
79	328	145250	149795	1933	145995	153596	-4545	28487	-0.160	0.000
80	329	214500	205976	9848	186613	225340	8524	26800	0.318	0.002
81	331	119000	168534	2709	163208	173860	-49534	28424	-1.743	0.005
82	332	139000	132034	2236	127637	136431	6966	28465	0.245	0.000
83	340	155000	140670	1954	136829	144512	14330	28485	0.503	0.000
84	343	87500	131165	2276	126690	135639	-43665	28461	-1.534	0.003
85	346	140200	157427	5238	147128	167726	-17227	28068	-0.614	0.002
86	347	151500	126711	2503	121789	131633	24789	28442	0.872	0.001
87	348	157500	154955	2055	150915	158995	2545	28478	0.089	0.000
88	353	95000	121406	3026	115455	127356	-26406	28391	-0.930	0.002
89	362	145000	151151	4773	141767	160536	-6151	28151	-0.219	0.000
90	363	198500	145533	3827	138008	153059	52967	28295	1.872	0.011
91	367	159000	150393	1942	146574	154212	8607	28486	0.302	0.000
92	368	165000	152402	1983	148503	156302	12598	28483	0.442	0.000
93	369	132000	143549	1913	139787	147311	-11549	28488	-0.405	0.000
94	370	162000	144581	1907	140832	148330	17419	28489	0.611	0.000
95	374	123000	146319	1904	142575	150063	-23319	28489	-0.819	0.000
96	376	61000	115247	3435	108493	122002	-54247	28345	-1.914	0.009

**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
97	387	81000	123577	2936	117805	129350	-42577	28401	-1.499	0.004
98	388	125000	121822	3007	115910	127734	3178	28394	0.112	0.000
99	391	119000	129022	2858	123403	134641	-10022	28409	-0.353	0.000
100	393	106500	122583	2744	117188	127978	-16083	28420	-0.566	0.000
101	394	100000	88656	5526	77789	99522	11344	28012	0.405	0.001
102	396	129000	122387	2982	116525	128250	6613	28396	0.233	0.000
103	398	169500	173097	2997	167204	178989	-3597	28395	-0.127	0.000
104	411	60000	126314	2869	120673	131956	-66314	28408	-2.334	0.009
105	419	126000	122090	2994	116202	127978	3910	28395	0.138	0.000
106	420	142000	132034	2236	127637	136431	9966	28465	0.350	0.000
107	425	139000	139638	1975	135754	143522	-638.1734	28484	-0.022	0.000
108	428	109008	123941	2662	118707	129175	-14933	28428	-0.525	0.000
109	438	119000	98766	4755	89416	108117	20234	28153	0.719	0.002
110	440	110000	123934	2924	118185	129684	-13934	28402	-0.491	0.000
111	442	118000	131194	2889	125514	136873	-13194	28406	-0.464	0.000
112	443	162900	157078	5211	146833	167324	5822	28073	0.207	0.000
113	446	127500	138601	3239	132233	144969	-11101	28368	-0.391	0.000
114	447	190000	177225	3275	170785	183665	12775	28364	0.450	0.000
115	460	110000	124828	3749	117456	132200	-14828	28305	-0.524	0.001
116	467	167000	144038	1910	140283	147793	22962	28488	0.806	0.000
117	468	146500	163972	2448	159158	168785	-17472	28447	-0.614	0.000
118	473	148000	120245	3087	114175	126316	27755	28385	0.978	0.002
119	486	147000	135130	2110	130981	139279	11870	28474	0.417	0.000
120	487	156000	132957	2196	128640	137275	23043	28468	0.809	0.001
121	492	133000	160387	2269	155925	164848	-27387	28462	-0.962	0.001
122	494	155000	143603	1913	139842	147365	11397	28488	0.400	0.000
123	498	184000	178607	7105	164638	192577	5393	27654	0.195	0.000
124	500	120000	124212	2646	119010	129415	-4212	28429	-0.148	0.000
125	503	140000	124470	2908	118752	130188	15530	28404	0.547	0.001
126	510	124500	131219	2273	126750	135689	-6719	28462	-0.236	0.000
127	511	164900	148709	1919	144936	152482	16191	28488	0.568	0.000
128	513	129900	121605	2804	116092	127119	8295	28414	0.292	0.000

**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
129	522	150000	142245	1928	138455	146036	7755	28487	0.272	0.000
130	523	159000	165010	5864	153480	176540	-6010	27944	-0.215	0.000
131	524	184750	227466	14887	198194	256737	-42716	24364	-1.753	0.191
132	527	132000	125082	2595	119979	130184	6918	28434	0.243	0.000
133	529	86000	106352	4303	97891	114813	-20352	28226	-0.721	0.002
134	532	128000	138687	4059	130706	146667	-10687	28262	-0.378	0.000
135	533	107500	119596	2932	113831	125360	-12096	28401	-0.426	0.000
136	534	39300	49084	9291	30815	67353	-9784	26998	-0.362	0.003
137	536	107500	128427	2855	122812	134041	-20927	28409	-0.737	0.001
138	538	111250	121605	2804	116092	127119	-10355	28414	-0.364	0.000
139	544	133000	116337	3147	110148	122525	16663	28378	0.587	0.001
140	547	210000	162482	5649	151375	173589	47518	27988	1.698	0.020
141	554	108000	121852	3005	115943	127761	-13852	28394	-0.488	0.000
142	556	113000	111318	4044	103366	119270	1682	28264	0.060	0.000
143	557	141000	133989	2154	129755	138224	7011	28471	0.246	0.000
144	563	108000	117984	3228	111636	124332	-9984	28369	-0.352	0.000
145	564	185000	138155	3208	131847	144463	46845	28371	1.651	0.006
146	570	135960	125896	2549	120885	130907	10064	28438	0.354	0.000
147	571	142600	168534	2709	163208	173860	-25934	28424	-0.912	0.001
148	572	120000	121605	2804	116092	127119	-1605	28414	-0.056	0.000
149	575	139000	134913	2118	130748	139077	4087	28474	0.144	0.000
150	576	118500	140724	1953	136885	144564	-22224	28485	-0.780	0.000
151	581	181900	152294	1981	148399	156188	29606	28484	1.039	0.001
152	583	118500	112629	3663	105426	119832	5871	28316	0.207	0.000
153	585	133000	157078	5211	146833	167324	-24078	28073	-0.858	0.004
154	587	130000	93014	5178	82833	103194	36986	28079	1.317	0.010
155	590	79500	101468	4575	92472	110464	-21968	28183	-0.779	0.003
156	606	205000	182548	3653	175366	189730	22452	28318	0.793	0.002
157	608	225000	148092	4088	140054	156130	76908	28258	2.722	0.026
158	616	137500	131925	2241	127519	136332	5575	28464	0.196	0.000
159	618	105500	119867	2914	114137	125597	-14367	28403	-0.506	0.000
160	621	67000	114057	3535	107106	121009	-47057	28333	-1.661	0.007

**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
161	626	160000	135293	2104	131156	139430	24707	28475	0.868	0.001
162	627	139900	151914	1972	148036	155791	-12014	28484	-0.422	0.000
163	628	153000	157237	2135	153038	161435	-4237	28472	-0.149	0.000
164	629	135000	187653	4029	179731	195576	-52653	28267	-1.863	0.012
165	630	168500	148003	1912	144243	151763	20497	28488	0.719	0.000
166	634	139400	132034	2236	127637	136431	7366	28465	0.259	0.000
167	637	60000	89702	5441	79004	100400	-29702	28029	-1.060	0.007
168	639	85000	112034	3719	104722	119347	-27034	28309	-0.955	0.003
169	643	345000	221546	6706	208361	234732	123454	27754	4.448	0.193
170	646	143250	127960	2435	123171	132749	15290	28448	0.537	0.000
171	647	98300	131599	2256	127164	136035	-33299	28463	-1.170	0.001
172	648	155000	120900	3052	114899	126901	34100	28389	1.201	0.003
173	649	155000	174563	3094	168480	180647	-19563	28384	-0.689	0.001
174	652	108000	133276	2951	127474	139078	-25276	28399	-0.890	0.001
175	657	145500	131871	2243	127460	136282	13629	28464	0.479	0.000
176	659	97500	153869	2022	149894	157844	-56369	28481	-1.979	0.003
177	660	167000	132562	2926	126809	138315	34438	28402	1.213	0.003
178	663	110000	150284	1940	146469	154100	-40284	28486	-1.414	0.002
179	664	137500	123488	2939	117709	129267	14012	28401	0.493	0.000
180	667	129000	203948	5290	193547	214349	-74948	28058	-2.671	0.042
181	672	103600	129081	2858	123462	134701	-25481	28409	-0.897	0.001
182	675	140000	136379	2066	132316	140442	3621	28477	0.127	0.000
183	695	141500	154115	4985	144312	163917	-12615	28114	-0.449	0.001
184	697	89000	73664	6858	60179	87149	15336	27716	0.553	0.003
185	698	123500	122506	2977	116654	128359	993.5481	28397	0.035	0.000
186	711	52000	83513	5963	71788	95238	-31513	27923	-1.129	0.010
187	714	129000	103648	4440	94918	112377	25352	28205	0.899	0.003
188	723	124500	121605	2804	116092	127119	2895	28414	0.102	0.000
189	724	135000	132086	2911	126361	137811	2914	28403	0.103	0.000
190	725	320000	138869	3257	132464	145274	181131	28366	6.386	0.090
191	726	120500	121605	2804	116092	127119	-1105	28414	-0.039	0.000
192	729	110000	171141	2870	165497	176785	-61141	28408	-2.152	0.008

**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
193	737	93500	131165	2276	126690	135639	-37665	28461	-1.323	0.002
194	739	179000	124053	2920	118311	129796	54947	28403	1.935	0.007
195	750	98000	133841	2973	127996	139687	-35841	28397	-1.262	0.003
196	755	156000	130404	2312	125859	134950	25596	28459	0.899	0.001
197	761	127500	121605	2804	116092	127119	5895	28414	0.207	0.000
198	762	100000	133370	3870	125761	140979	-33370	28289	-1.180	0.004
199	772	102000	124648	2903	118940	130357	-22648	28404	-0.797	0.001
200	773	107000	121584	3018	115651	127518	-14584	28392	-0.514	0.000
201	774	114500	124212	2646	119010	129415	-9712	28429	-0.342	0.000
202	798	110000	116663	3125	110517	122808	-6663	28381	-0.235	0.000
203	805	118000	135945	2081	131853	140037	-17945	28476	-0.630	0.000
204	807	135500	127906	2438	123111	132700	7594	28448	0.267	0.000
205	808	223500	157340	5231	147054	167625	66160	28069	2.357	0.032
206	809	159950	133663	2167	129403	137924	26287	28470	0.923	0.001
207	814	157900	153000	1998	149071	156929	4900	28482	0.172	0.000
208	815	116000	125541	2882	119874	131208	-9541	28406	-0.336	0.000
209	817	137000	129427	2360	124787	134067	7573	28455	0.266	0.000
210	827	109500	88307	5555	77384	99230	21193	28007	0.757	0.004
211	831	166000	150284	1940	146469	154100	15716	28486	0.552	0.000
212	834	167000	157019	2127	152837	161201	9981	28473	0.351	0.000
213	835	139950	136814	2052	132778	140849	3136	28478	0.110	0.000
214	840	130500	124053	2920	118311	129796	6447	28403	0.227	0.000
215	843	174900	137954	2018	133986	141923	36946	28481	1.297	0.001
216	844	141000	172445	2954	166636	178254	-31445	28399	-1.107	0.002
217	854	158000	153163	2002	149226	157100	4837	28482	0.170	0.000
218	864	132500	137031	2045	133009	141053	-4531	28479	-0.159	0.000
219	866	148500	129101	2376	124429	133773	19399	28453	0.682	0.001
220	871	109500	123235	2704	117918	128552	-13735	28424	-0.483	0.000
221	873	116000	124104	2652	118889	129319	-8104	28429	-0.285	0.000
222	874	133000	143549	1913	139787	147311	-10549	28488	-0.370	0.000
223	881	157000	120781	3058	114768	126794	36219	28388	1.276	0.003
224	885	100000	123126	2711	117796	128456	-23126	28423	-0.814	0.001

**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
225	887	145000	167665	2657	162441	172889	-22665	28428	-0.797	0.001
226	888	135500	129795	2865	124163	135428	5705	28408	0.201	0.000
227	889	268000	195095	4596	186058	204131	72905	28180	2.587	0.030
228	890	149500	156422	2105	152283	160560	-6922	28475	-0.243	0.000
229	891	122900	124864	2608	119737	129992	-1964	28433	-0.069	0.000
230	896	140000	172228	2940	166447	178009	-32228	28401	-1.135	0.002
231	901	110000	121279	2825	115726	126833	-11279	28412	-0.397	0.000
232	902	153000	145613	1904	141870	149356	7387	28489	0.259	0.000
233	906	128000	132414	2219	128050	136778	-4414	28466	-0.155	0.000
234	911	154300	198191	4836	188681	207700	-43891	28140	-1.560	0.012
235	913	88000	108441	4176	100230	116653	-20441	28245	-0.724	0.002
236	918	135000	124916	2896	119221	130611	10084	28405	0.355	0.000
237	920	176500	151479	1963	147620	155338	25021	28485	0.878	0.001
238	922	145900	153804	4726	144511	163097	-7904	28158	-0.281	0.000
239	932	117500	124919	2605	119797	130040	-7419	28433	-0.261	0.000
240	935	242000	187056	3984	179221	194890	54944	28273	1.943	0.013
241	936	79900	85082	5827	73624	96540	-5182	27951	-0.185	0.000
242	943	150000	131194	2889	125514	136873	18806	28406	0.662	0.001
243	947	143000	136814	2052	132778	140849	6186	28478	0.217	0.000
244	951	129000	121605	2804	116092	127119	7395	28414	0.260	0.000
245	955	127500	117508	3262	111095	123922	9992	28365	0.352	0.000
246	961	116500	94757	5045	84838	104676	21743	28103	0.774	0.003
247	968	135000	134315	2141	130106	138524	684.7812	28472	0.024	0.000
248	970	140000	134152	2147	129930	138374	5848	28471	0.205	0.000
249	971	135000	139421	1980	135527	143315	-4421	28484	-0.155	0.000
250	975	167500	195953	8818	178614	213291	-28453	27156	-1.048	0.019
251	977	85500	95716	4973	85937	105495	-10216	28116	-0.363	0.001
252	979	110000	114950	3460	108147	121752	-4950	28342	-0.175	0.000
253	981	178400	128938	2385	124249	133627	49462	28453	1.738	0.004
254	986	125000	122982	2957	117167	128798	2018	28399	0.071	0.000
255	993	187000	175215	3138	169045	181385	11785	28379	0.415	0.000
256	996	121600	127181	3758	119791	134571	-5581	28304	-0.197	0.000

**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
257	997	136500	131708	2251	127283	136134	4792	28463	0.168	0.000
258	1001	82000	116437	3341	109868	123006	-34437	28356	-1.214	0.003
259	1007	163500	164678	2486	159789	169567	-1178	28444	-0.041	0.000
260	1012	100000	137858	3188	131588	144127	-37858	28374	-1.334	0.004
261	1015	119200	133446	2175	129169	137724	-14246	28469	-0.500	0.000
262	1021	176000	122030	2997	116137	127924	53970	28395	1.901	0.007
263	1027	167500	143332	1915	139565	147098	24168	28488	0.848	0.001
264	1029	105000	149415	1927	145625	153205	-44415	28487	-1.559	0.002
265	1036	84000	113492	3585	106443	120541	-29492	28326	-1.041	0.003
266	1046	139600	139910	3334	133355	146466	-310.3788	28357	-0.011	0.000
267	1050	84900	116021	3373	109389	122653	-31121	28352	-1.098	0.003
268	1053	165000	182059	3617	174946	189171	-17059	28322	-0.602	0.001
269	1054	144500	133752	2969	127914	139590	10748	28397	0.378	0.000
270	1065	154000	137357	2036	133355	141359	16643	28480	0.584	0.000
271	1068	167900	162179	2355	157548	166811	5721	28455	0.201	0.000
272	1070	135000	123180	2707	117857	128504	11820	28424	0.416	0.000
273	1071	135000	131599	2256	127164	136035	3401	28463	0.119	0.000
274	1073	91500	131670	2900	125967	137372	-40170	28405	-1.414	0.003
275	1074	159500	130777	2880	125114	136440	28723	28407	1.011	0.002
276	1078	138800	134207	2145	129989	138424	4593	28472	0.161	0.000
277	1084	160000	142626	1923	138844	146407	17374	28487	0.610	0.000
278	1089	137500	139196	3281	132745	145647	-1696	28363	-0.060	0.000
279	1091	92900	131165	2276	126690	135639	-38265	28461	-1.344	0.002
280	1094	146000	139855	1970	135981	143730	6145	28484	0.216	0.000
281	1095	129000	125516	2570	120462	130570	3484	28436	0.123	0.000
282	1099	128000	135375	3931	127645	143105	-7375	28280	-0.261	0.000
283	1102	119500	126276	2527	121307	131246	-6776	28440	-0.238	0.000
284	1103	135000	136271	2070	132200	140341	-1271	28477	-0.045	0.000
285	1104	159500	139530	1978	135641	143418	19970	28484	0.701	0.000
286	1113	129900	118998	2971	113157	124839	10902	28397	0.384	0.000
287	1114	134500	129427	2360	124787	134067	5073	28455	0.178	0.000
288	1120	133700	131165	2276	126690	135639	2535	28461	0.089	0.000

**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
289	1123	112000	116913	3305	110415	123412	-4913	28360	-0.173	0.000
290	1124	118000	109119	4007	101239	116998	8881	28270	0.314	0.000
291	1126	115000	129264	2368	124608	133920	-14264	28454	-0.501	0.000
292	1136	102000	105914	4309	97442	114386	-3914	28225	-0.139	0.000
293	1137	119000	142680	1922	138900	146460	-23680	28488	-0.831	0.001
294	1140	144000	121690	3766	114286	129095	22310	28303	0.788	0.002
295	1141	139000	126385	2521	121428	131342	12615	28441	0.444	0.000
296	1145	80000	115842	3387	109182	122502	-35842	28351	-1.264	0.004
297	1146	149000	157340	5231	147054	167625	-8340	28069	-0.297	0.001
298	1151	124000	125299	2583	120221	130377	-1299	28435	-0.046	0.000
299	1152	149900	131967	2908	126249	137685	17933	28404	0.631	0.001
300	1155	201800	173531	3025	167583	179480	28269	28392	0.996	0.002
301	1157	179900	143386	1915	139621	147151	36514	28488	1.282	0.001
302	1169	235000	151067	4412	142392	159742	83933	28209	2.975	0.036
303	1172	163000	143169	1917	139399	146938	19831	28488	0.696	0.000
304	1180	93000	121792	3008	115878	127707	-28792	28393	-1.014	0.002
305	1186	104900	124678	2902	118971	130385	-19778	28404	-0.696	0.001
306	1201	116050	121605	2804	116092	127119	-5555	28414	-0.196	0.000
307	1203	117000	137467	4008	129585	145348	-20467	28270	-0.724	0.002
308	1209	140000	144364	1908	140613	148115	-4364	28488	-0.153	0.000
309	1213	113000	108345	4088	100307	116384	4655	28258	0.165	0.000
310	1215	134500	128938	2385	124249	133627	5562	28453	0.195	0.000
311	1219	80500	99464	4708	90207	108720	-18964	28162	-0.673	0.002
312	1221	115000	124212	2646	119010	129415	-9212	28429	-0.324	0.000
313	1223	143000	174943	3120	168810	181077	-31943	28381	-1.126	0.003
314	1224	137900	190695	4259	182322	199069	-52795	28233	-1.870	0.013
315	1226	145000	136488	2063	132432	140544	8512	28478	0.299	0.000
316	1228	147000	124212	2646	119010	129415	22788	28429	0.802	0.001
317	1230	127000	156530	2109	152384	160677	-29530	28474	-1.037	0.001
318	1232	132500	139312	1983	135414	143211	-6812	28483	-0.239	0.000
319	1233	101800	141159	1945	137335	144983	-39359	28486	-1.382	0.001
320	1234	142000	139204	1985	135300	143107	2796	28483	0.098	0.000

**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
321	1250	119000	128340	2415	123591	133090	-9340	28450	-0.328	0.000
322	1251	244000	189283	4152	181120	197446	54717	28249	1.937	0.014
323	1255	165400	137620	3173	131381	143858	27780	28375	0.979	0.002
324	1256	127500	139123	4078	131105	147140	-11623	28260	-0.411	0.001
325	1258	99900	114057	3535	107106	121009	-14157	28333	-0.500	0.001
326	1260	151000	131925	2241	127519	136332	19075	28464	0.670	0.000
327	1262	128900	131708	2251	127283	136134	-2808	28463	-0.099	0.000
328	1264	180500	178956	7138	164921	192991	1544	27646	0.056	0.000
329	1265	181000	147297	1907	143546	151047	33703	28489	1.183	0.001
330	1270	144000	157454	2144	153239	161669	-13454	28472	-0.473	0.000
331	1274	177000	128724	2856	123108	134340	48276	28409	1.699	0.005
332	1276	137000	178963	3396	172285	185641	-41963	28350	-1.480	0.005
333	1286	132500	143045	4270	134649	151441	-10545	28231	-0.374	0.001
334	1291	180500	137248	2039	133239	141257	43252	28479	1.519	0.002
335	1295	115000	114057	3535	107106	121009	942.6340	28333	0.033	0.000
336	1296	138500	131817	2246	127401	136233	6683	28464	0.235	0.000
337	1297	155000	135945	2081	131853	140037	19055	28476	0.669	0.000
338	1298	140000	120245	3087	114175	126316	19755	28385	0.696	0.001
339	1299	160000	256204	19056	218734	293674	-96204	21262	-4.525	2.741
340	1300	154000	142354	1926	138566	146142	11646	28487	0.409	0.000
341	1305	130000	139167	3279	132720	145613	-9167	28363	-0.323	0.000
342	1315	119000	116556	3332	110005	123108	2444	28357	0.086	0.000
343	1316	206900	189392	4160	181212	197571	17508	28248	0.620	0.001
344	1320	111000	116556	3332	110005	123108	-5556	28357	-0.196	0.000
345	1321	156500	154955	2055	150915	158995	1545	28478	0.054	0.000
346	1322	72500	82729	6032	70868	94589	-10229	27908	-0.367	0.001
347	1324	82500	81683	6124	69640	93725	817.4131	27888	0.029	0.000
348	1327	79000	111380	3781	103945	118815	-32380	28301	-1.144	0.004
349	1333	100000	112629	3663	105426	119832	-12629	28316	-0.446	0.001
350	1341	123000	122040	2777	116579	127500	960.1662	28417	0.034	0.000
351	1351	200000	217744	6397	205167	230322	-17744	27827	-0.638	0.004
352	1352	171000	167882	2670	162633	173132	3118	28427	0.110	0.000

**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
353	1353	134900	122475	3758	115085	129865	12425	28304	0.439	0.001
354	1357	110000	123126	2711	117796	128456	-13126	28423	-0.462	0.000
355	1358	149900	133229	2184	128934	137524	16671	28469	0.586	0.000
356	1363	104900	169077	2742	163686	174468	-64177	28420	-2.258	0.008
357	1372	165500	164895	2498	159983	169807	604.9504	28443	0.021	0.000
358	1378	117000	136073	3080	130016	142129	-19073	28386	-0.672	0.001
359	1381	58500	114057	3535	107106	121009	-55557	28333	-1.961	0.010
360	1382	237500	189663	4180	181443	197883	47837	28245	1.694	0.010
361	1385	105000	125779	2878	120121	131437	-20779	28407	-0.731	0.001
362	1390	131000	126135	3752	118758	133513	4865	28305	0.172	0.000
363	1392	124000	160713	2284	156221	165204	-36713	28461	-1.290	0.002
364	1393	123000	123561	2685	118282	128839	-560.6780	28426	-0.020	0.000
365	1398	137500	151848	4822	142368	161329	-14348	28142	-0.510	0.001
366	1399	138000	178094	3336	171535	184652	-40094	28357	-1.414	0.005
367	1401	120000	120906	3775	113483	128328	-905.7265	28302	-0.032	0.000
368	1412	140000	165275	2519	160322	170229	-25275	28441	-0.889	0.001
369	1413	90000	131165	2276	126690	135639	-41165	28461	-1.446	0.002
370	1415	207000	181048	7339	166618	195478	25952	27593	0.941	0.010
371	1419	124000	136814	2052	132778	140849	-12814	28478	-0.450	0.000
372	1424	274970	153834	4730	144533	163134	121136	28158	4.302	0.087
373	1425	144000	147677	1910	143922	151432	-3677	28488	-0.129	0.000
374	1426	142000	142680	1922	138900	146460	-679.8617	28488	-0.024	0.000
375	1428	140000	159301	2220	154935	163666	-19301	28466	-0.678	0.000
376	1436	174000	158160	2172	153889	162430	15840	28470	0.556	0.000
377	1437	120500	121605	2804	116092	127119	-1105	28414	-0.039	0.000
378	1444	121000	102950	4482	94138	111763	18050	28198	0.640	0.002
379	1449	112000	128397	2855	122783	134011	-16397	28409	-0.577	0.001
380	1451	136000	172010	2926	166257	177764	-36010	28402	-1.268	0.003
381	1453	145000	120245	3087	114175	126316	24755	28385	0.872	0.001
382	1459	142125	133229	2184	128934	137524	8896	28469	0.312	0.000
383	1460	147500	125719	2879	120059	131380	21781	28407	0.767	0.001

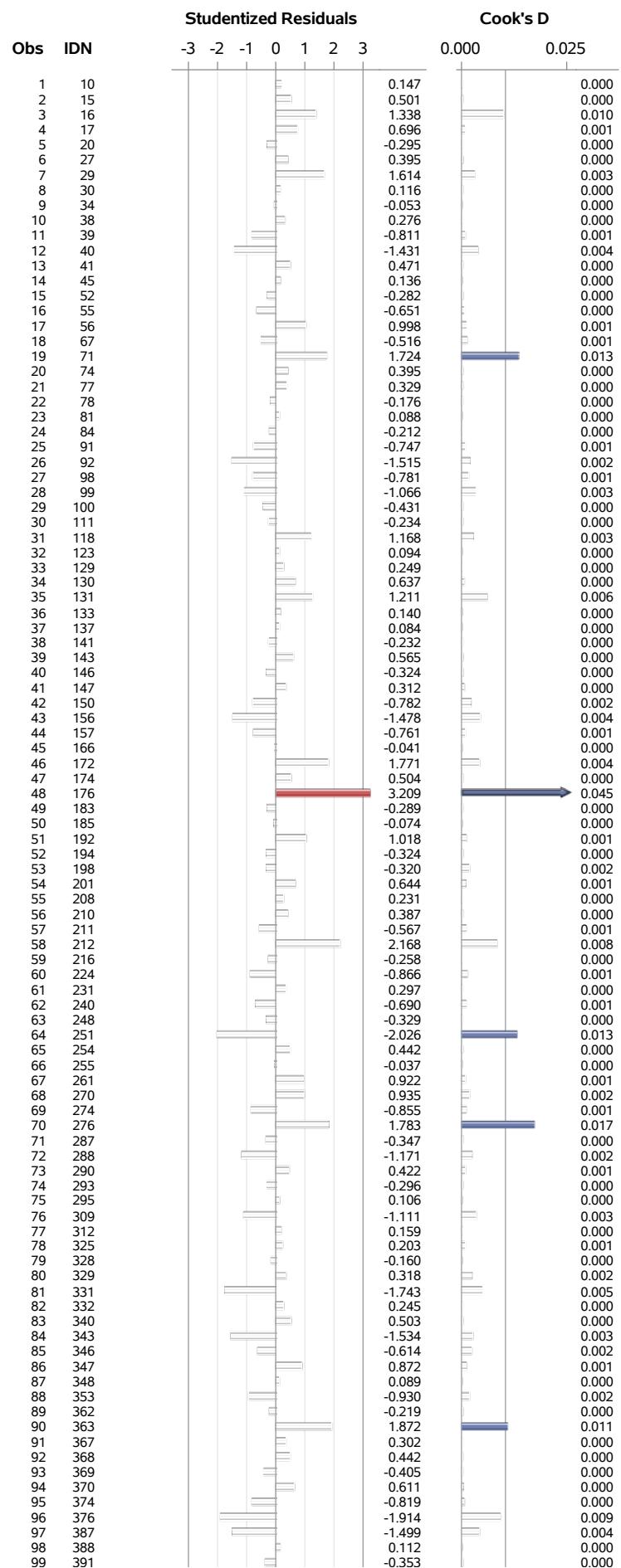
**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

The REG Procedure

Model: MODEL1

Dependent Variable: SalePrice

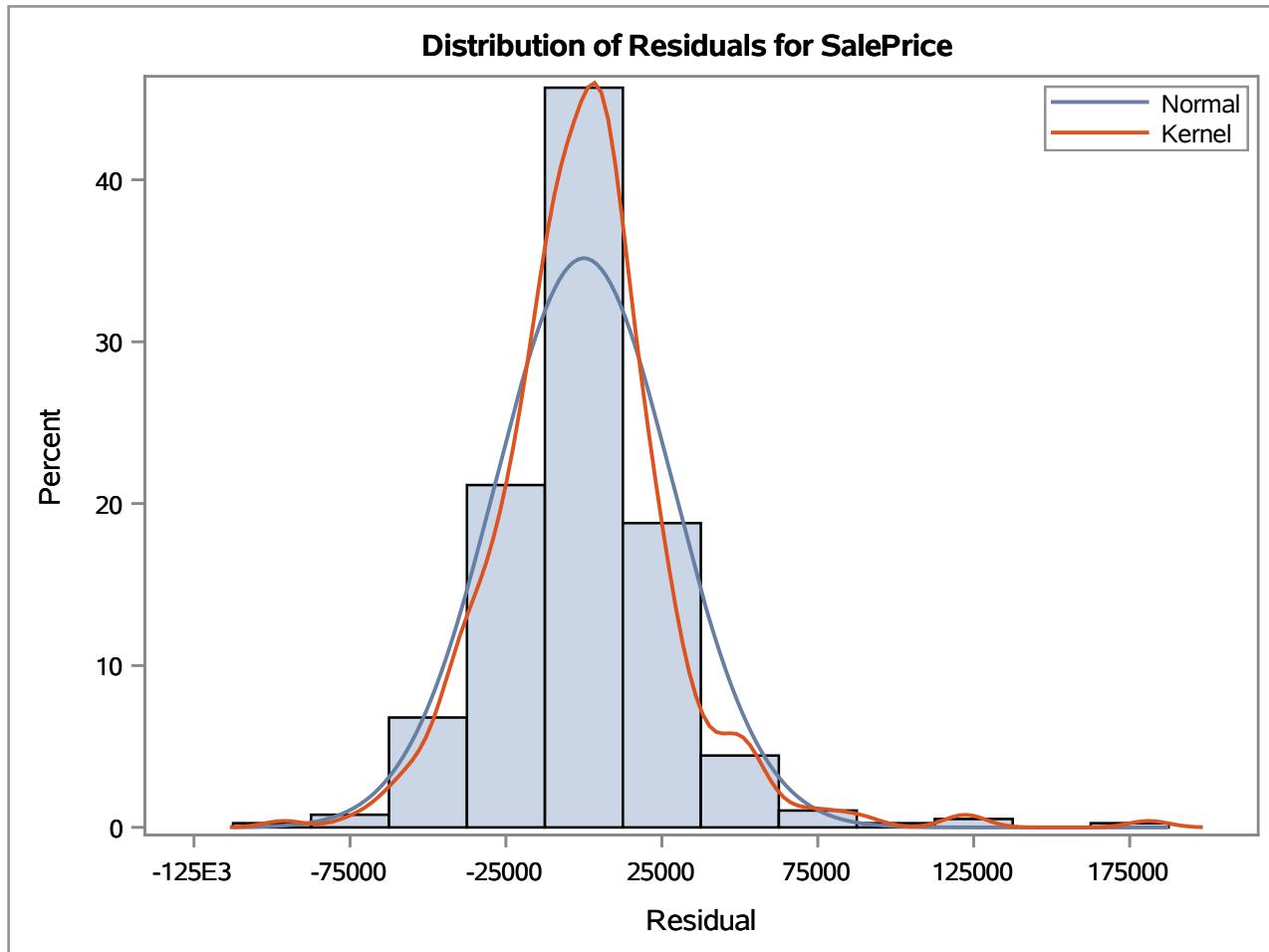
### Studentized Residuals and Cook's D for SalePrice



**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

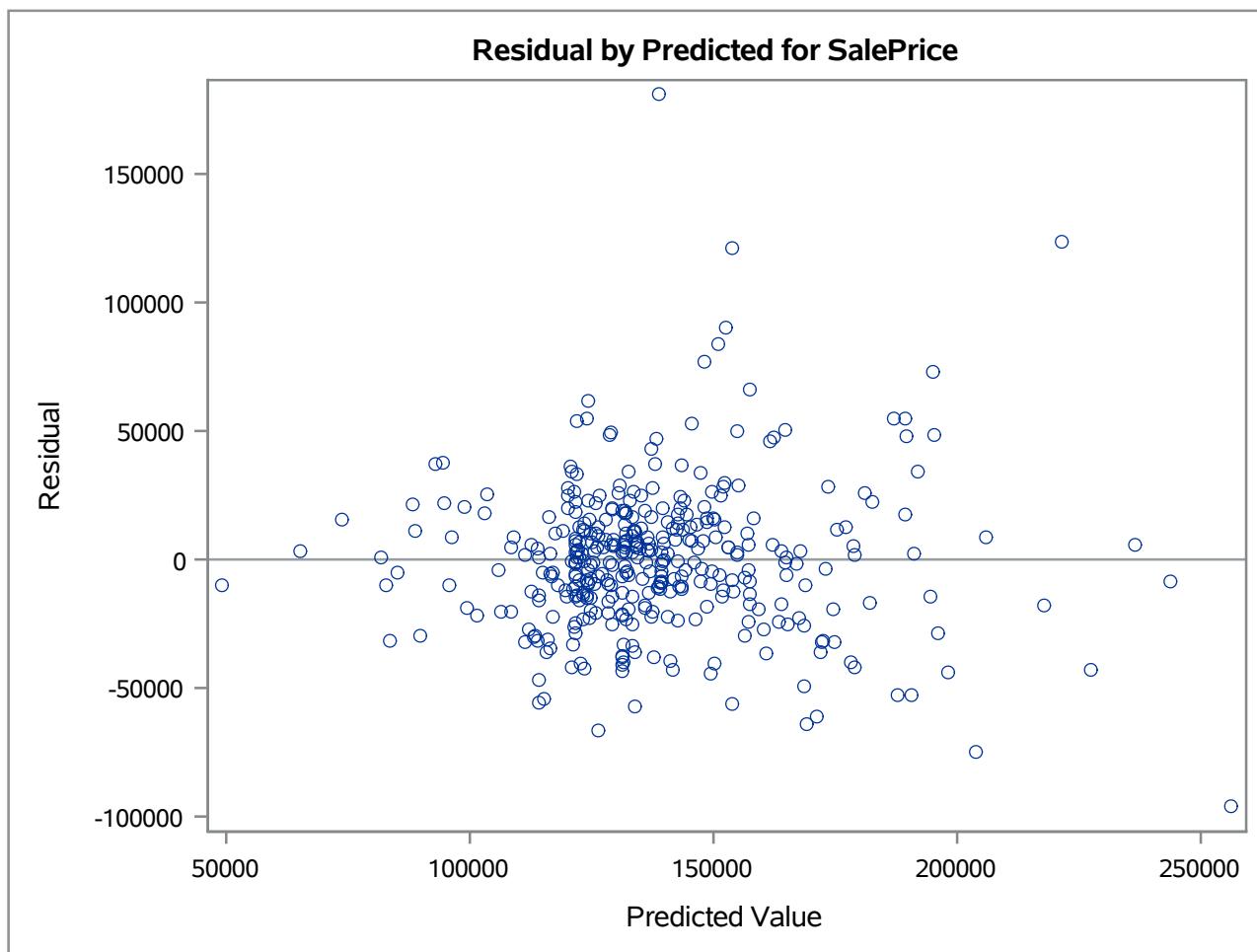
**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Sum of Residuals	0
Sum of Squared Residuals	3.073431E11
Predicted Residual SS (PRESS)	3.409675E11



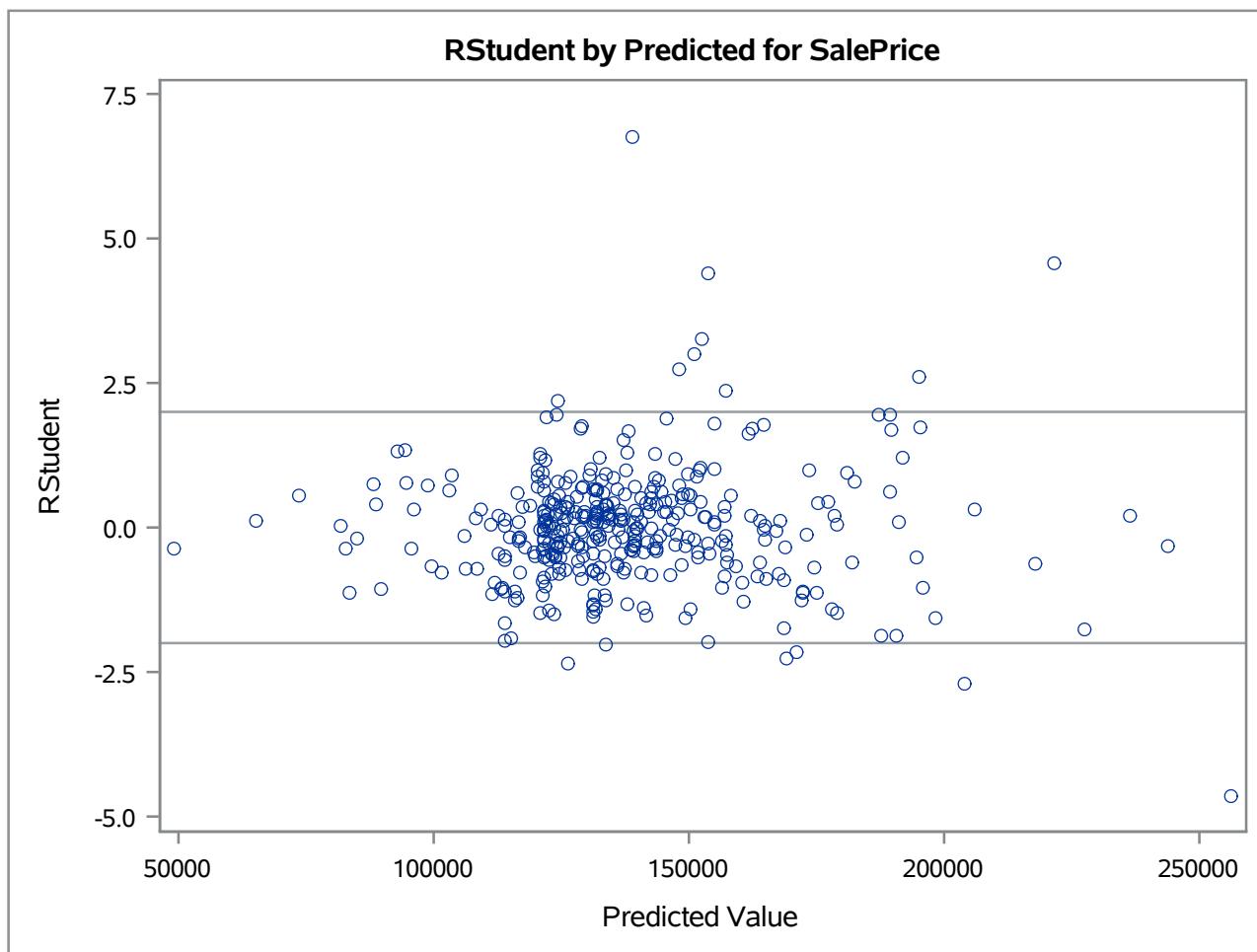
**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

The REG Procedure  
Model: MODEL1



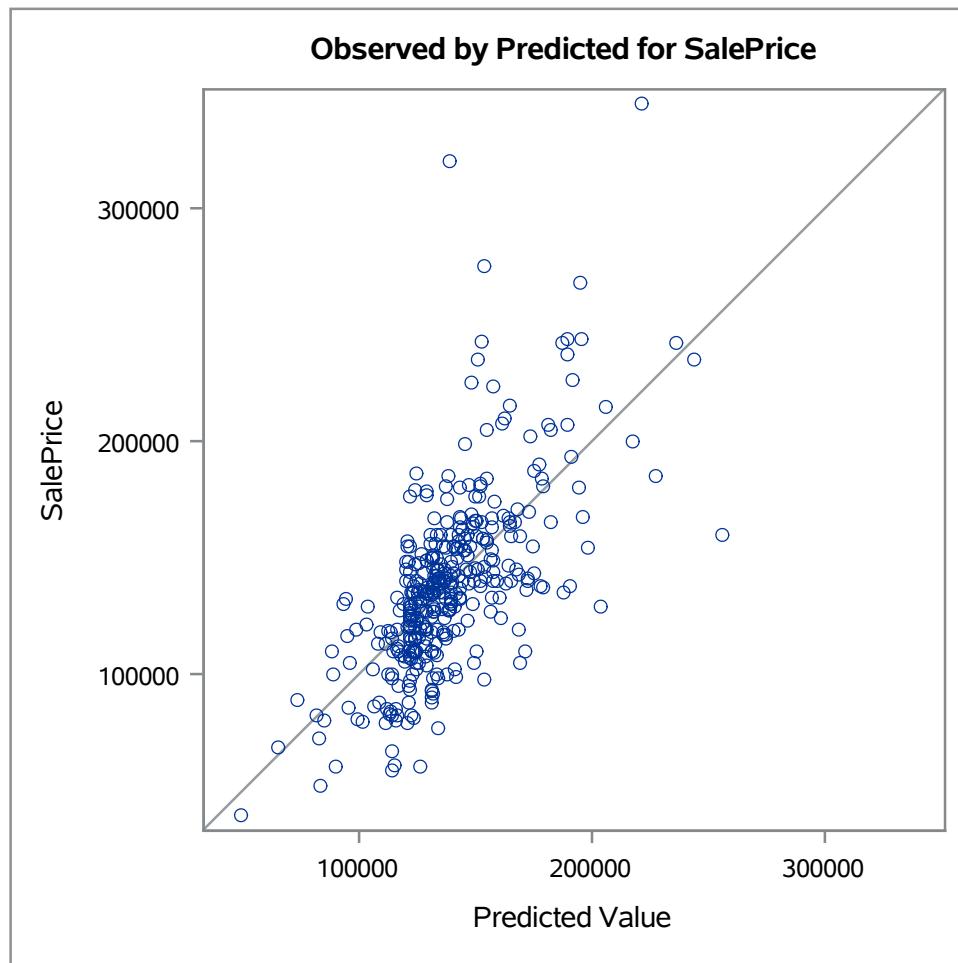
**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

The REG Procedure  
Model: MODEL1



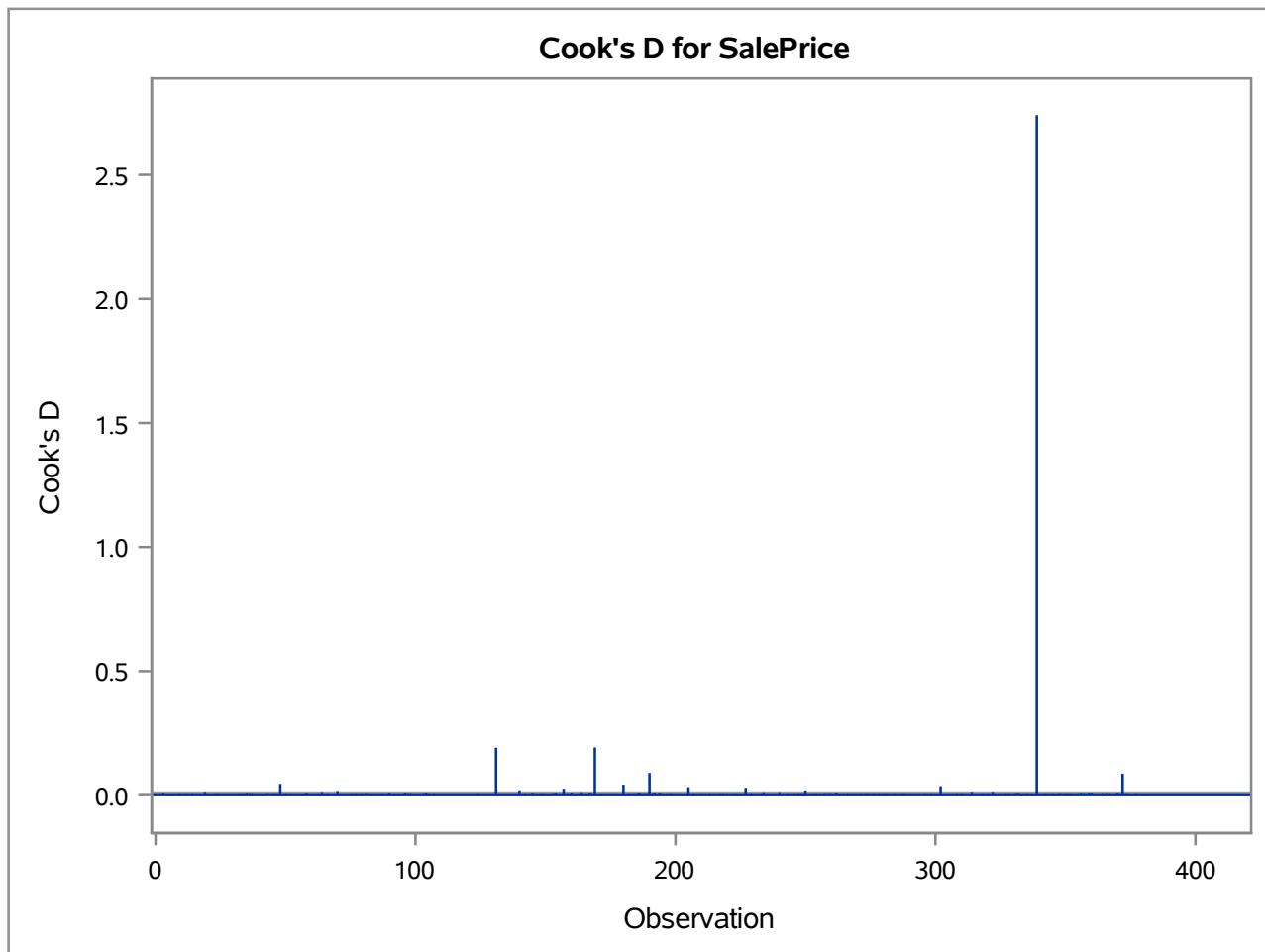
**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

The REG Procedure  
Model: MODEL1



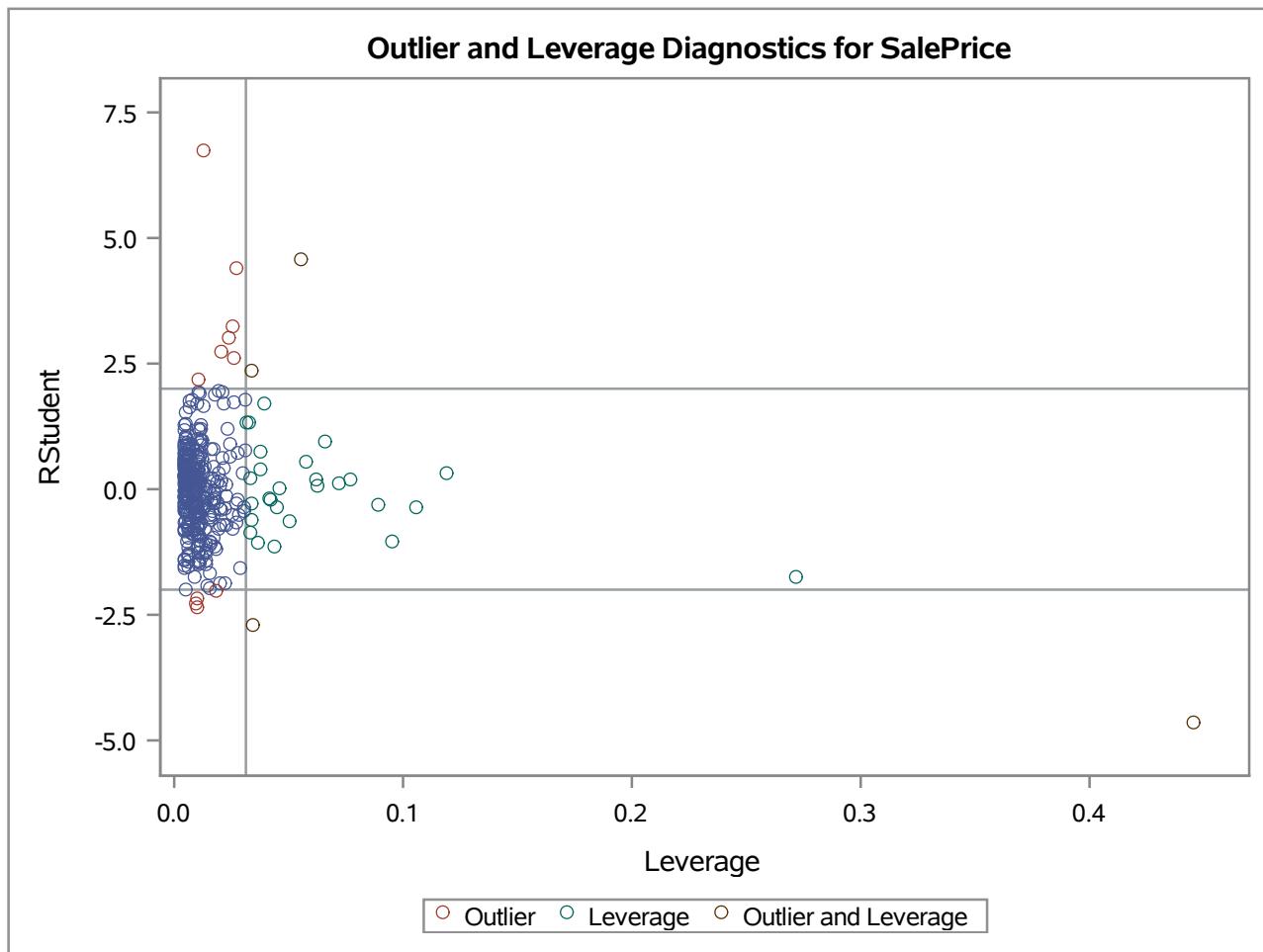
**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

The REG Procedure  
Model: MODEL1



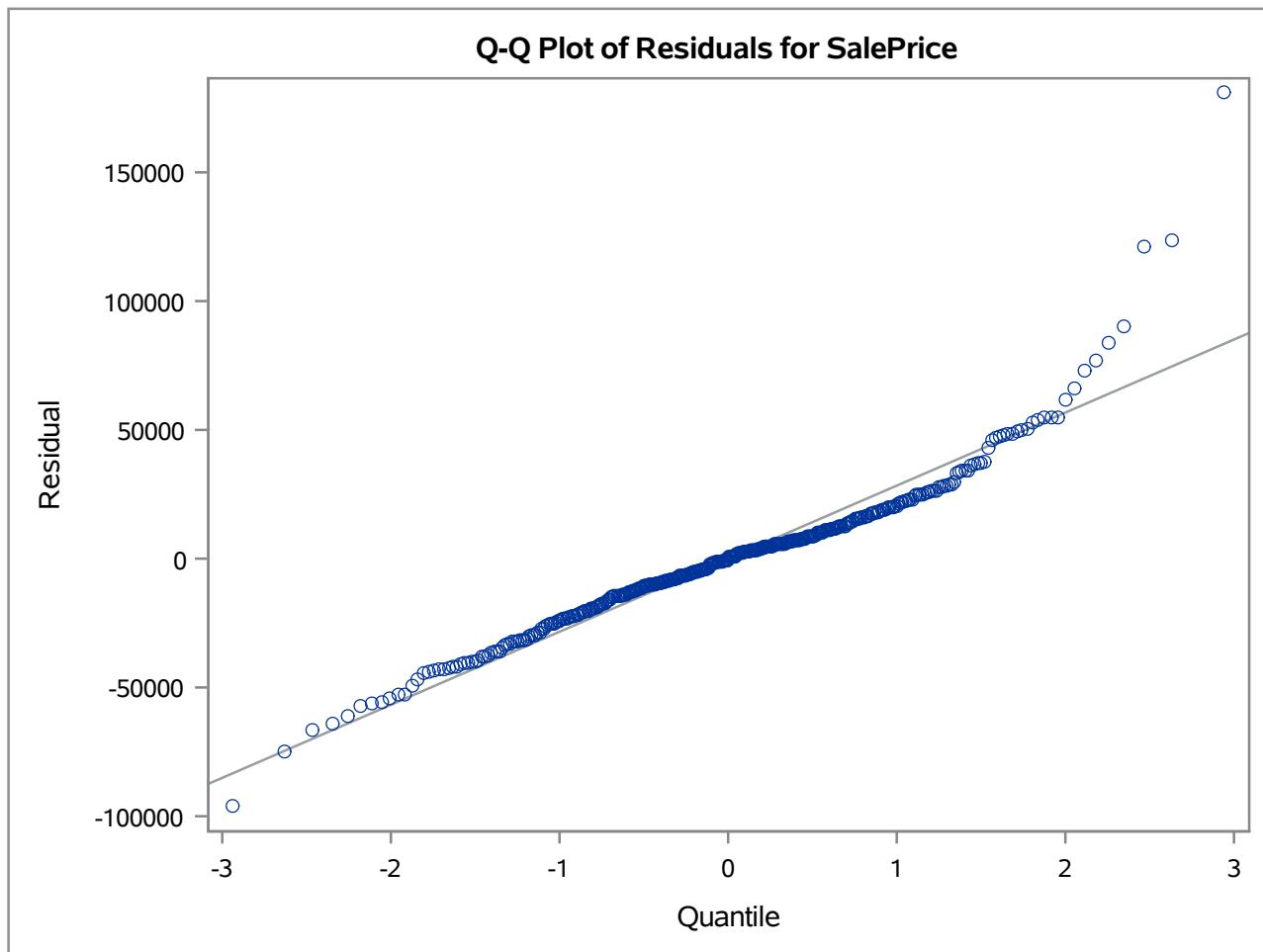
**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

The REG Procedure  
Model: MODEL1



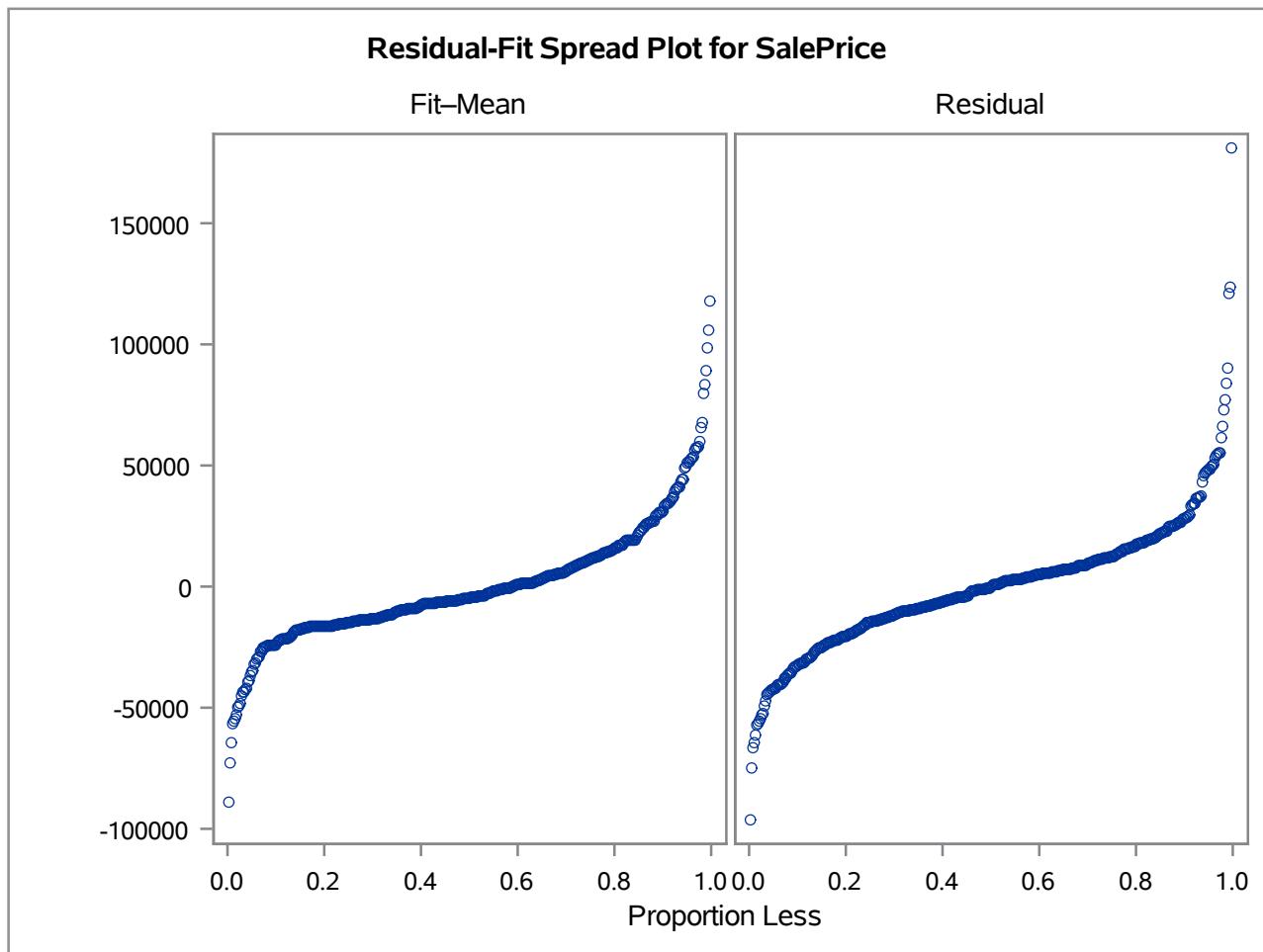
**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

The REG Procedure  
Model: MODEL1



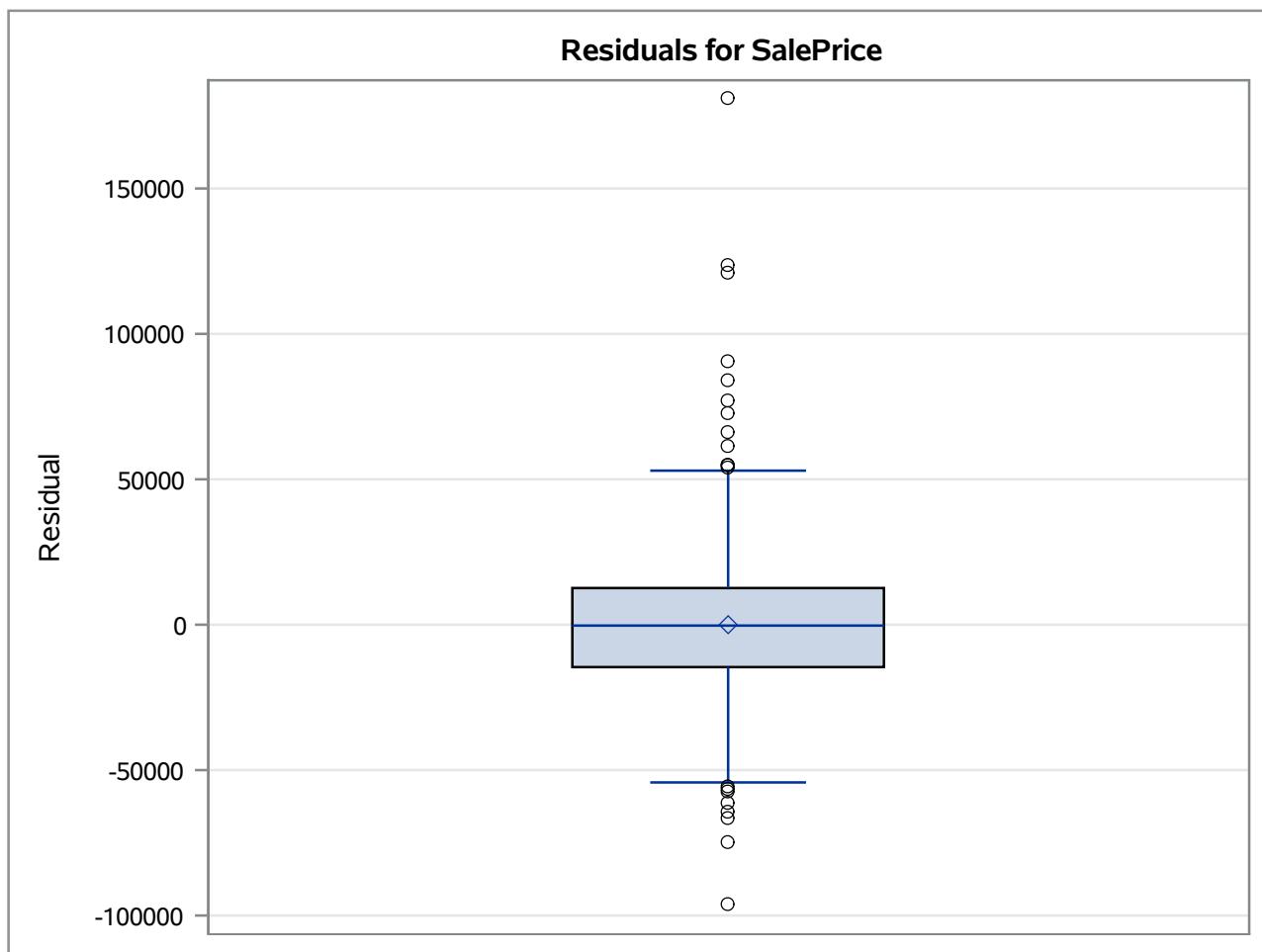
**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

The REG Procedure  
Model: MODEL1



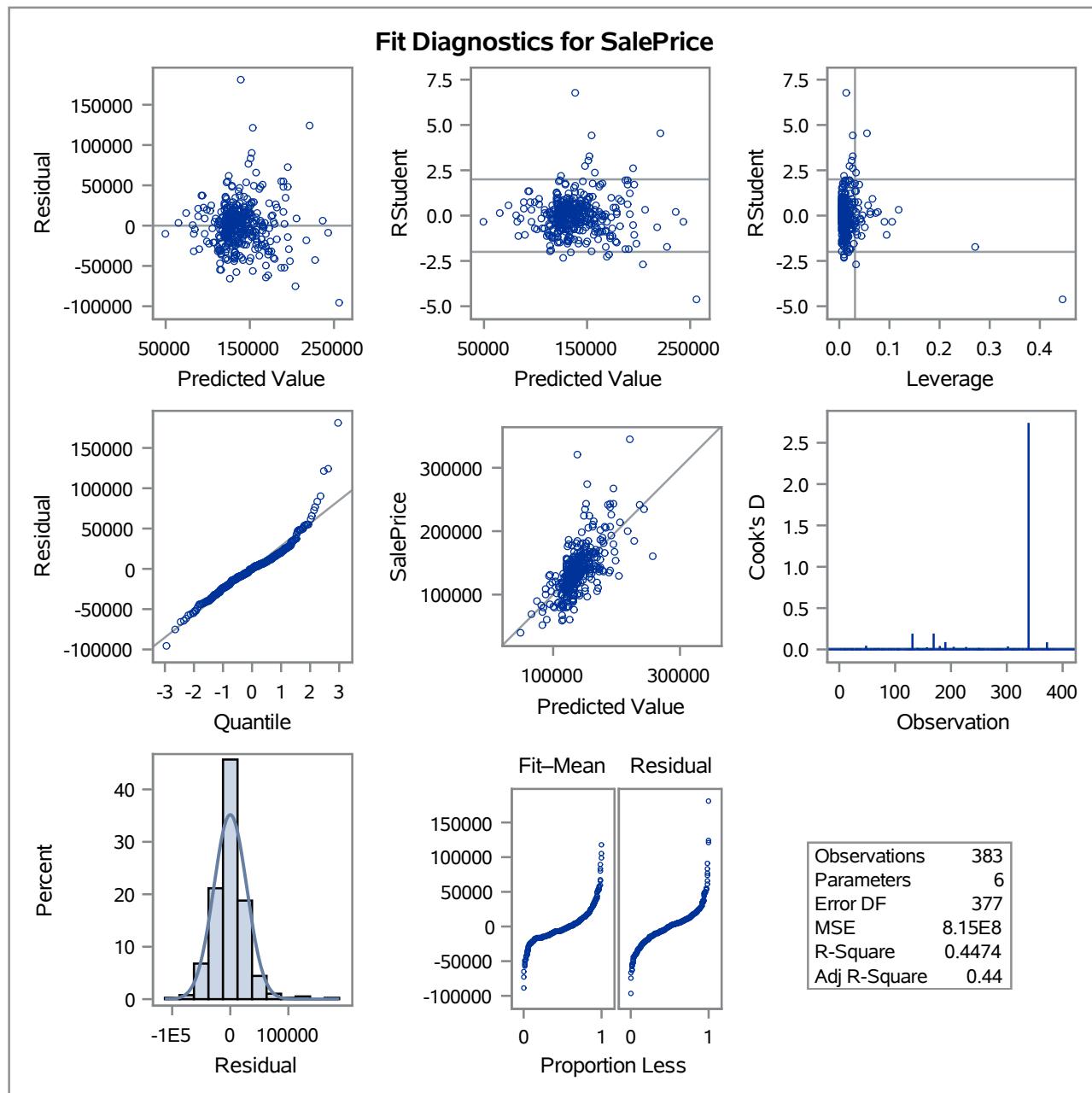
**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

The REG Procedure  
Model: MODEL1



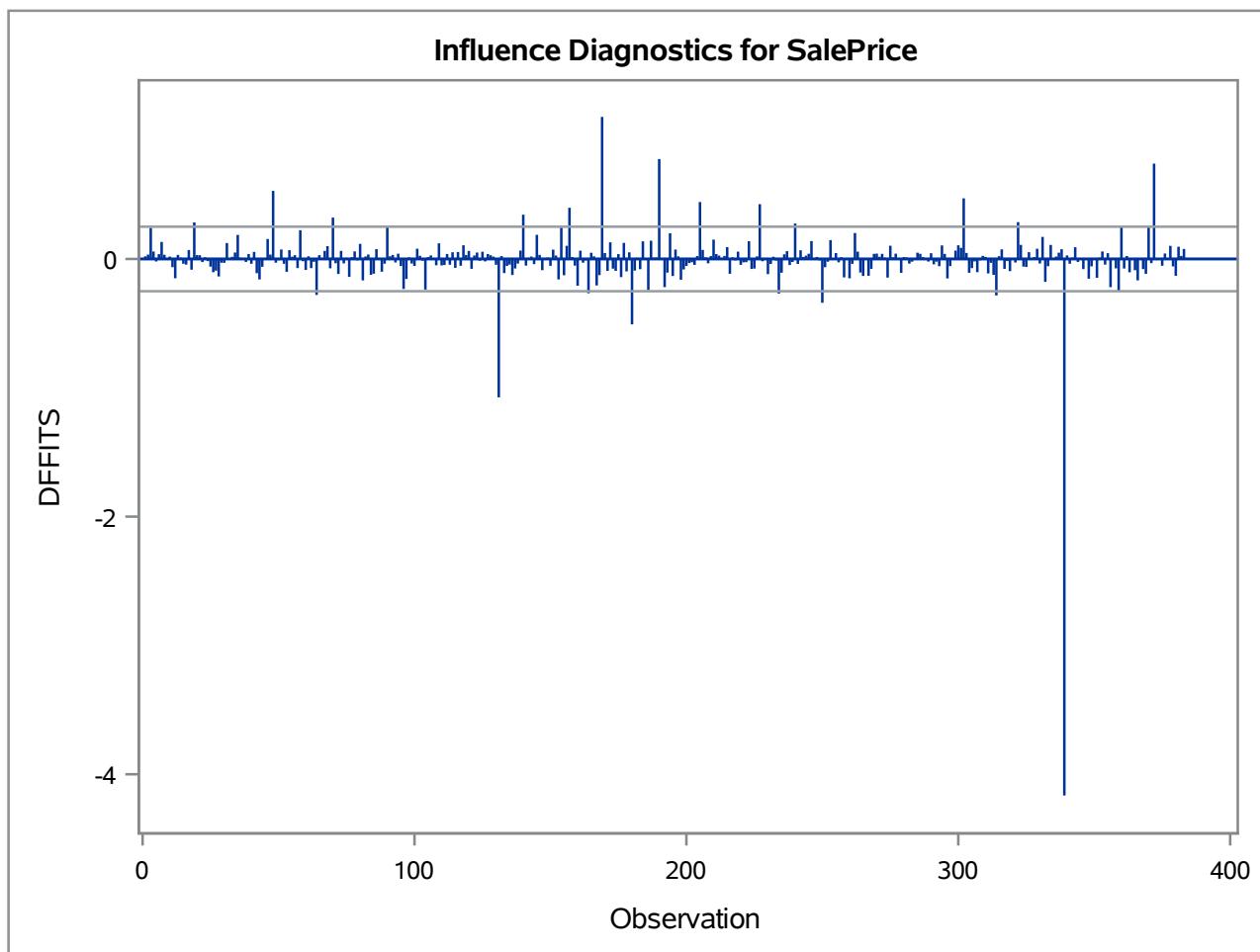
**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**



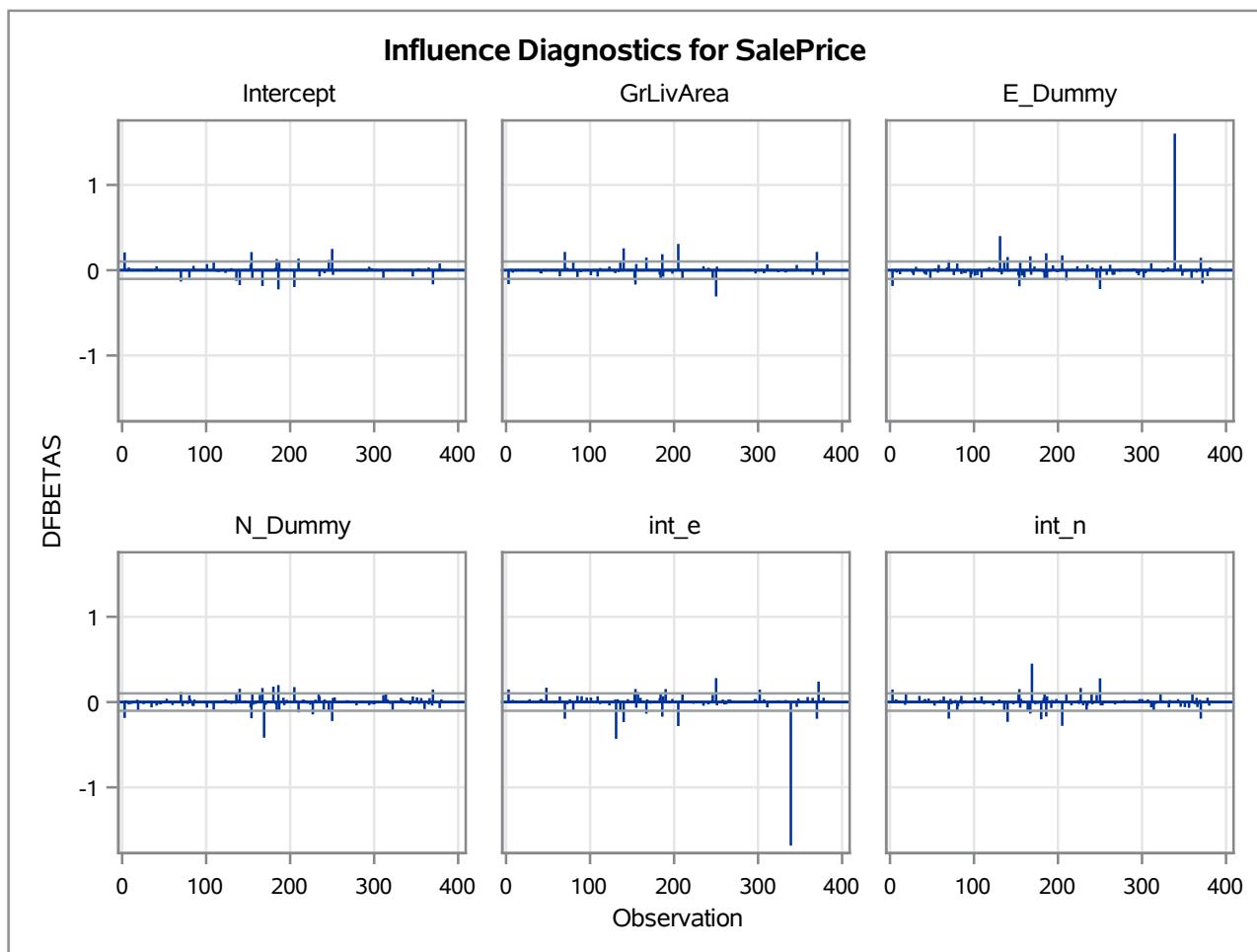
**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

The REG Procedure  
Model: MODEL1



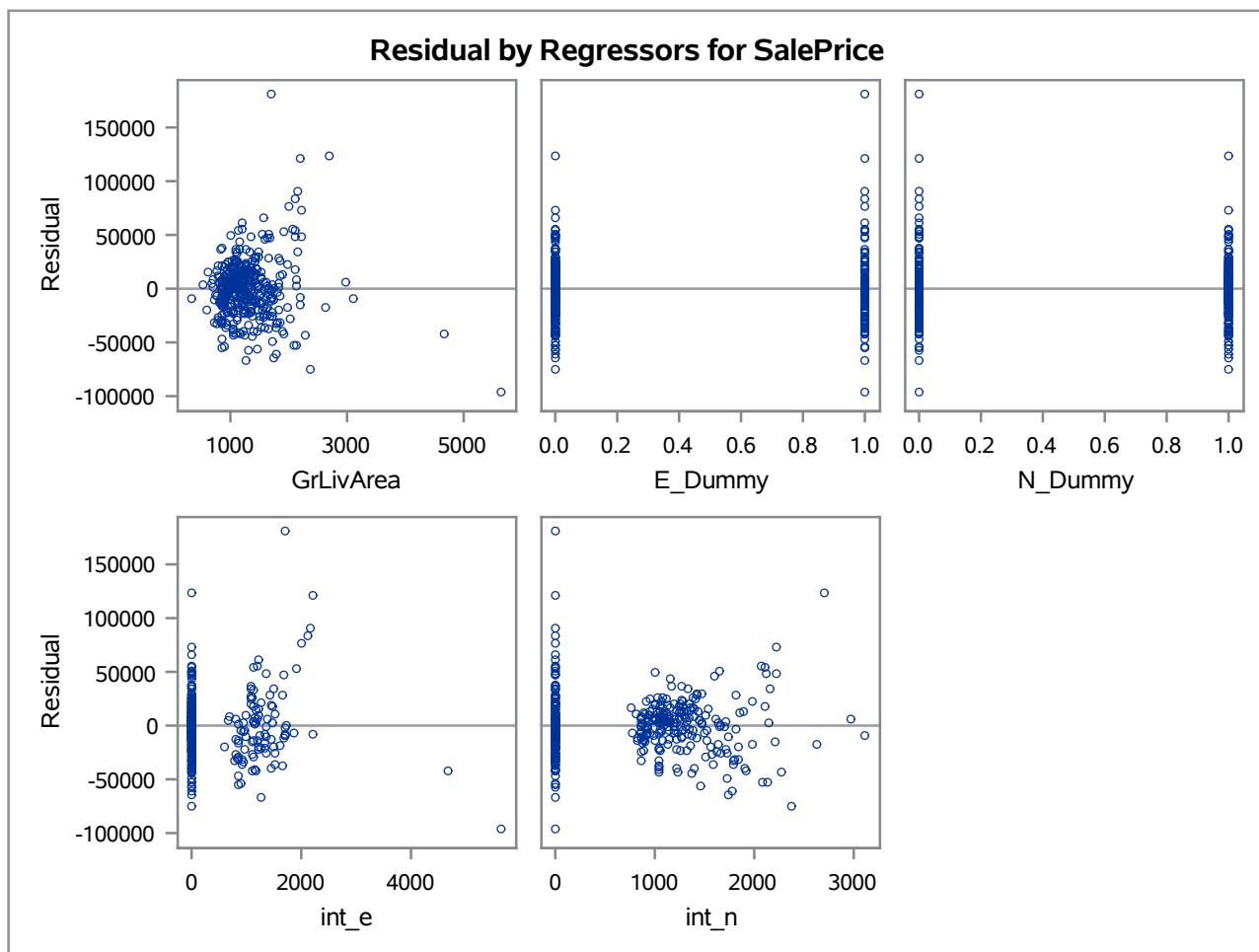
**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

The REG Procedure  
Model: MODEL1



**Linear-Linear MLR with Dummy and Interactions with Influential Point 1299**

The REG Procedure  
Model: MODEL1



**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Number of Observations Read	382
Number of Observations Used	382

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
<b>Model</b>	5	2.650162E11	53003234724	68.57	<.0001
<b>Error</b>	376	2.906534E11	773014472		
<b>Corrected Total</b>	381	5.556696E11			

Root MSE	27803	R-Square	0.4769
Dependent Mean	138005	Adj R-Sq	0.4700
Coeff Var	20.14646		

Parameter Estimates								
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr >  t	Variance Inflation	95% Confidence Limits	
<b>Intercept</b>	1	19972	12027	1.66	0.0976	0	-3677.20206	43620
<b>GrLivArea</b>	1	87.16253	9.52530	9.15	<.0001	8.35249	68.43300	105.89206
<b>E_Dummy</b>	1	46585	14389	3.24	0.0013	19.64425	18292	74879
<b>N_Dummy</b>	1	54705	13518	4.05	<.0001	21.86058	28124	81285
<b>int_e</b>	1	-39.85230	11.09962	-3.59	0.0004	23.44550	-61.67740	-18.02720
<b>int_n</b>	1	-32.84667	10.53160	-3.12	0.0020	28.27615	-53.55488	-12.13846

**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
1	10	118000	113846	3843	106289	121402	4154	27536	0.151	0.000
2	15	157000	142734	1871	139055	146414	14266	27740	0.514	0.000
3	16	132000	94408	4938	84699	104118	37592	27361	1.374	0.010
4	17	149000	129210	2309	124670	133749	19790	27707	0.714	0.001
5	20	139000	147405	1858	143752	151059	-8405	27741	-0.303	0.000
6	27	134800	123561	2614	118421	128701	11239	27680	0.406	0.000
7	29	207500	161582	2265	157128	166035	45918	27711	1.657	0.003
8	30	68500	65296	7461	50626	79966	3204	26783	0.120	0.000
9	34	165500	167013	2550	162000	172027	-1513	27686	-0.055	0.000
10	38	153000	145124	1855	141478	148771	7876	27741	0.284	0.000
11	39	109000	132088	2175	127812	136365	-23088	27718	-0.833	0.001
12	40	82000	121058	2913	115330	126787	-39058	27650	-1.413	0.004
13	41	160000	146591	1855	142944	150237	13409	27741	0.483	0.000
14	45	141000	137140	1989	133230	141050	3860	27732	0.139	0.000
15	52	114500	122475	3660	115278	129671	-7975	27561	-0.289	0.000
16	55	130000	148546	1867	144875	152217	-18546	27740	-0.669	0.000
17	56	180500	152077	1924	148294	155859	28423	27736	1.025	0.001
18	67	180000	194552	4434	185832	203271	-14552	27447	-0.530	0.001
19	71	244000	195421	4500	186573	204269	48579	27437	1.771	0.014
20	74	144900	133663	2110	129515	137812	11237	27723	0.405	0.000
21	77	135750	126385	2455	121558	131212	9365	27695	0.338	0.000
22	78	127000	131975	3733	124635	139316	-4975	27551	-0.181	0.000
23	81	193500	191021	4171	182820	199222	2479	27489	0.090	0.000
24	84	126500	132523	2156	128283	136763	-6023	27719	-0.217	0.000
25	91	109900	131165	2216	126808	135522	-21265	27715	-0.767	0.001
26	92	98600	141756	1884	138052	145461	-43156	27739	-1.556	0.002
27	98	94750	111975	3389	105311	118639	-17225	27596	-0.624	0.001
28	99	83000	106061	3837	98515	113607	-23061	27537	-0.837	0.002
29	100	128950	141213	1893	137492	144935	-12263	27739	-0.442	0.000
30	111	136900	154317	4235	145991	162644	-17417	27479	-0.634	0.002
31	118	155000	119781	2960	113960	125602	35219	27645	1.274	0.003
32	123	136000	133338	2123	129164	137512	2662	27722	0.096	0.000

**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
33	129	155000	147894	1861	144234	151554	7106	27741	0.256	0.000
34	130	150000	131871	2184	127576	136166	18129	27717	0.654	0.000
35	131	226000	191836	4231	183516	200156	34164	27479	1.243	0.006
36	133	150750	146754	1855	143106	150401	3996	27741	0.144	0.000
37	137	143000	140616	1903	136873	144358	2384	27738	0.086	0.000
38	141	115000	121605	2731	116236	126974	-6605	27669	-0.239	0.000
39	143	166000	149904	1884	146200	153608	16096	27739	0.580	0.000
40	146	130000	147410	3651	140231	154589	-17410	27562	-0.632	0.001
41	147	105000	96239	4806	86790	105688	8761	27385	0.320	0.001
42	150	115000	137118	3890	129470	144766	-22118	27530	-0.803	0.002
43	156	79000	118409	3019	112473	124345	-39409	27639	-1.426	0.004
44	157	109500	131165	2216	126808	135522	-21665	27715	-0.782	0.001
45	166	127500	130662	2814	125129	136196	-3162	27660	-0.114	0.000
46	172	215000	164623	2418	159869	169378	50377	27698	1.819	0.004
47	174	163000	148655	1868	144982	152328	14345	27740	0.517	0.000
48	176	243000	168652	5648	157546	179758	74348	27223	2.731	0.054
49	183	120000	129953	2805	124437	135469	-9953	27661	-0.360	0.000
50	185	127000	129099	3680	121862	136336	-2099	27558	-0.076	0.000
51	192	184000	155010	2002	151072	158947	28990	27731	1.045	0.001
52	194	130000	147410	3651	140231	154589	-17410	27562	-0.632	0.001
53	198	235000	243707	8304	227380	260035	-8707	26534	-0.328	0.002
54	201	140000	119592	2968	113756	125428	20408	27644	0.738	0.001
55	208	141000	134424	2080	130333	138515	6576	27725	0.237	0.000
56	210	145000	133989	2097	129866	138113	11011	27724	0.397	0.000
57	211	98000	107433	3726	100106	114760	-9433	27552	-0.342	0.000
58	212	186000	123897	2836	118321	129473	62103	27658	2.245	0.009
59	216	134450	141811	1883	138108	145514	-7361	27739	-0.265	0.000
60	224	97000	121605	2731	116236	126974	-24605	27669	-0.889	0.001
61	231	148000	139530	1926	135743	143316	8470	27736	0.305	0.000
62	240	113000	136907	2998	131013	142801	-23907	27641	-0.865	0.001
63	248	140000	149361	1876	145672	153050	-9361	27740	-0.337	0.000
64	251	76500	133806	3780	126373	141239	-57306	27545	-2.080	0.014

**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
65	254	158000	145396	1854	141750	149041	12604	27741	0.454	0.000
66	255	145000	146047	1854	142403	149692	-1047	27741	-0.038	0.000
67	261	176000	149741	1881	146042	153440	26259	27739	0.947	0.001
68	270	148000	119213	2984	113346	125080	28787	27643	1.041	0.002
69	274	139000	163320	2350	158698	167941	-24320	27704	-0.878	0.001
70	276	205000	154899	4911	145242	164557	50101	27366	1.831	0.018
71	287	159000	168860	2657	163636	174084	-9860	27676	-0.356	0.000
72	288	88000	121279	2750	115871	126688	-33279	27667	-1.203	0.002
73	290	153575	141650	4087	133614	149687	11925	27501	0.434	0.001
74	293	131000	147741	3677	140511	154971	-16741	27559	-0.607	0.001
75	295	167000	163972	2384	159284	168659	3028	27701	0.109	0.000
76	309	82500	107291	3738	99942	114640	-24791	27551	-0.900	0.002
77	312	132000	127471	2397	122758	132185	4529	27700	0.163	0.000
78	325	242000	236429	7718	221253	251605	5571	26710	0.209	0.001
79	328	145250	149795	1882	146094	153496	-4545	27739	-0.164	0.000
80	329	214500	205976	9590	187121	224832	8524	26097	0.327	0.002
81	331	119000	168534	2638	163348	173720	-49534	27678	-1.790	0.005
82	332	139000	132034	2177	127753	136315	6966	27718	0.251	0.000
83	340	155000	140670	1902	136930	144411	14330	27738	0.517	0.000
84	343	87500	131165	2216	126808	135522	-43665	27715	-1.576	0.003
85	346	140200	157427	5100	147398	167456	-17227	27331	-0.630	0.002
86	347	151500	126711	2437	121918	131504	24789	27696	0.895	0.001
87	348	157500	154955	2001	151021	158889	2545	27731	0.092	0.000
88	353	95000	119119	2988	113244	124993	-24119	27642	-0.873	0.001
89	362	145000	151151	4647	142013	160289	-6151	27412	-0.224	0.000
90	363	198500	157487	4529	148583	166392	41013	27432	1.495	0.010
91	367	159000	150393	1891	146674	154112	8607	27739	0.310	0.000
92	368	165000	152402	1931	148605	156200	12598	27736	0.454	0.000
93	369	132000	143549	1863	139885	147213	-11549	27741	-0.416	0.000
94	370	162000	144581	1856	140930	148231	17419	27741	0.628	0.000
95	374	123000	146319	1854	142674	149964	-23319	27741	-0.841	0.001
96	376	61000	109325	3579	102287	116364	-48325	27572	-1.753	0.009

**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
97	387	81000	122572	2867	116935	128210	-41572	27655	-1.503	0.004
98	388	125000	119781	2960	113960	125602	5219	27645	0.189	0.000
99	391	119000	131230	2823	125679	136781	-12230	27659	-0.442	0.000
100	393	106500	122583	2672	117330	127836	-16083	27674	-0.581	0.001
101	394	100000	88656	5381	78074	99237	11344	27277	0.416	0.001
102	396	129000	120680	2926	114926	126434	8320	27649	0.301	0.000
103	398	169500	173097	2918	167359	178835	-3597	27650	-0.130	0.000
104	411	60000	126925	2797	121425	132424	-66925	27662	-2.419	0.010
105	419	126000	120207	2944	114418	125995	5793	27647	0.210	0.000
106	420	142000	132034	2177	127753	136315	9966	27718	0.360	0.000
107	425	139000	139638	1923	135856	143420	-638.1734	27737	-0.023	0.000
108	428	109008	123941	2592	118844	129038	-14933	27682	-0.539	0.000
109	438	119000	98766	4631	89661	107872	20234	27415	0.738	0.003
110	440	110000	123140	2852	117531	128749	-13140	27656	-0.475	0.000
111	442	118000	134684	2911	128959	140408	-16684	27650	-0.603	0.001
112	443	162900	157078	5074	147101	167055	5822	27336	0.213	0.000
113	446	127500	146464	3579	139427	153501	-18964	27572	-0.688	0.001
114	447	190000	177225	3189	170954	183496	12775	27620	0.463	0.000
115	460	110000	124828	3651	117650	132006	-14828	27562	-0.538	0.001
116	467	167000	144038	1860	140381	147694	22962	27741	0.828	0.001
117	468	146500	163972	2384	159284	168659	-17472	27701	-0.631	0.000
118	473	148000	117273	3073	111230	123317	30727	27633	1.112	0.003
119	486	147000	135130	2055	131090	139170	11870	27727	0.428	0.000
120	487	156000	132957	2138	128753	137162	23043	27721	0.831	0.001
121	492	133000	160387	2210	156042	164731	-27387	27715	-0.988	0.001
122	494	155000	143603	1863	139940	147266	11397	27741	0.411	0.000
123	498	184000	178607	6918	165004	192210	5393	26929	0.200	0.000
124	500	120000	124212	2576	119147	129278	-4212	27684	-0.152	0.000
125	503	140000	123992	2834	118420	129563	16008	27658	0.579	0.001
126	510	124500	131219	2213	126867	135572	-6719	27715	-0.242	0.000
127	511	164900	148709	1869	145035	152383	16191	27740	0.584	0.000
128	513	129900	121605	2731	116236	126974	8295	27669	0.300	0.000

**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
129	522	150000	142245	1877	138554	145937	7755	27740	0.280	0.000
130	523	159000	165010	5710	153782	176238	-6010	27210	-0.221	0.000
131	524	184750	287780	19458	249518	326041	-103030	19859	-5.188	4.307
132	527	132000	125082	2527	120113	130050	6918	27688	0.250	0.000
133	529	86000	95180	4831	85680	104679	-9180	27380	-0.335	0.001
134	532	128000	138687	3952	130916	146458	-10687	27521	-0.388	0.001
135	533	107500	119596	2855	113982	125209	-12096	27656	-0.437	0.000
136	534	39300	49084	9047	31294	66874	-9784	26290	-0.372	0.003
137	536	107500	130284	2809	124760	135807	-22784	27661	-0.824	0.001
138	538	111250	121605	2731	116236	126974	-10355	27669	-0.374	0.000
139	544	133000	116337	3065	110310	122363	16663	27634	0.603	0.001
140	547	210000	162482	5500	151667	173298	47518	27254	1.744	0.021
141	554	108000	119828	2959	114011	125646	-11828	27645	-0.428	0.000
142	556	113000	111318	3938	103574	119062	1682	27523	0.061	0.000
143	557	141000	133989	2097	129866	138113	7011	27724	0.253	0.000
144	563	108000	113678	3277	107233	120122	-5678	27609	-0.206	0.000
145	564	185000	145754	3526	138821	152688	39246	27579	1.423	0.006
146	570	135960	125896	2482	121017	130776	10064	27692	0.363	0.000
147	571	142600	168534	2638	163348	173720	-25934	27678	-0.937	0.001
148	572	120000	121605	2731	116236	126974	-1605	27669	-0.058	0.000
149	575	139000	134913	2062	130857	138968	4087	27727	0.147	0.000
150	576	118500	140724	1901	136986	144463	-22224	27738	-0.801	0.001
151	581	181900	152294	1929	148501	156086	29606	27736	1.067	0.001
152	583	118500	105162	3912	97469	112855	13338	27526	0.485	0.001
153	585	133000	157078	5074	147101	167055	-24078	27336	-0.881	0.004
154	587	130000	93014	5042	83100	102927	36986	27342	1.353	0.010
155	590	79500	101468	4455	92708	110229	-21968	27444	-0.800	0.003
156	606	205000	182548	3557	175554	189541	22452	27575	0.814	0.002
157	608	225000	161556	4924	151875	171237	63444	27364	2.319	0.029
158	616	137500	131925	2182	127635	136216	5575	27717	0.201	0.000
159	618	105500	119867	2838	114287	125447	-14367	27658	-0.519	0.000
160	621	67000	107433	3726	100106	114760	-40433	27552	-1.467	0.007

**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
161	626	160000	135293	2049	131264	139321	24707	27728	0.891	0.001
162	627	139900	151914	1920	148138	155689	-12014	27737	-0.433	0.000
163	628	153000	157237	2079	153148	161325	-4237	27725	-0.153	0.000
164	629	135000	187653	3923	179939	195368	-52653	27525	-1.913	0.012
165	630	168500	148003	1862	144341	151664	20497	27741	0.739	0.000
166	634	139400	132034	2177	127753	136315	7366	27718	0.266	0.000
167	637	60000	89702	5298	79284	100119	-29702	27294	-1.088	0.007
168	639	85000	104216	3993	96364	112067	-19216	27515	-0.698	0.002
169	643	345000	221546	6530	208707	234386	123454	27025	4.568	0.203
170	646	143250	127960	2372	123297	132623	15290	27702	0.552	0.000
171	647	98300	131599	2196	127281	135918	-33299	27716	-1.201	0.002
172	648	155000	118314	3023	112369	124259	36686	27638	1.327	0.004
173	649	155000	174563	3013	168639	180487	-19563	27639	-0.708	0.001
174	652	108000	137995	3047	132003	143988	-29995	27636	-1.085	0.002
175	657	145500	131871	2184	127576	136166	13629	27717	0.492	0.000
176	659	97500	153869	1969	149998	157740	-56369	27733	-2.033	0.003
177	660	167000	136860	2996	130970	142750	30140	27641	1.090	0.002
178	663	110000	150284	1890	146569	153999	-40284	27739	-1.452	0.002
179	664	137500	122430	2871	116785	128075	15070	27655	0.545	0.001
180	667	129000	203948	5151	193820	214076	-74948	27322	-2.743	0.045
181	672	103600	131325	2825	125771	136879	-27725	27659	-1.002	0.002
182	675	140000	136379	2012	132423	140336	3621	27730	0.131	0.000
183	695	141500	154115	4855	144569	163660	-12615	27376	-0.461	0.001
184	697	89000	73664	6678	60532	86795	15336	26989	0.568	0.003
185	698	123500	120869	2920	115128	126610	2631	27649	0.095	0.000
186	711	52000	83513	5807	72095	94931	-31513	27190	-1.159	0.010
187	714	129000	103648	4323	95147	112148	25352	27465	0.923	0.004
188	723	124500	121605	2731	116236	126974	2895	27669	0.105	0.000
189	724	135000	136103	2964	130275	141931	-1103	27645	-0.040	0.000
190	725	320000	146890	3611	139789	153990	173110	27568	6.279	0.113
191	726	120500	121605	2731	116236	126974	-1105	27669	-0.040	0.000
192	729	110000	171141	2795	165645	176637	-61141	27662	-2.210	0.008

**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
193	737	93500	131165	2216	126808	135522	-37665	27715	-1.359	0.002
194	739	179000	123329	2848	117729	128929	55671	27657	2.013	0.007
195	750	98000	138894	3092	132814	144975	-40894	27631	-1.480	0.005
196	755	156000	130404	2251	125978	134831	25596	27712	0.924	0.001
197	761	127500	121605	2731	116236	126974	5895	27669	0.213	0.000
198	762	100000	133370	3768	125961	140779	-33370	27547	-1.211	0.005
199	772	102000	124275	2828	118714	129836	-22275	27659	-0.805	0.001
200	773	107000	119402	2976	113551	125254	-12402	27643	-0.449	0.000
201	774	114500	124212	2576	119147	129278	-9712	27684	-0.351	0.000
202	798	110000	116663	3043	110678	122647	-6663	27636	-0.241	0.000
203	805	118000	135945	2026	131960	139929	-17945	27729	-0.647	0.000
204	807	135500	127906	2374	123237	132575	7594	27702	0.274	0.000
205	808	223500	157340	5094	147324	167356	66160	27333	2.421	0.034
206	809	159950	133663	2110	129515	137812	26287	27723	0.948	0.001
207	814	157900	153000	1946	149174	156826	4900	27735	0.177	0.000
208	815	116000	125695	2807	120176	131214	-9695	27661	-0.350	0.000
209	817	137000	129427	2298	124909	133945	7573	27708	0.273	0.000
210	827	109500	88307	5409	77670	98943	21193	27272	0.777	0.004
211	831	166000	150284	1890	146569	153999	15716	27739	0.567	0.000
212	834	167000	157019	2071	152947	161092	9981	27726	0.360	0.000
213	835	139950	136814	1998	132884	140743	3136	27731	0.113	0.000
214	840	130500	123329	2848	117729	128929	7171	27657	0.259	0.000
215	843	174900	137954	1965	134090	141818	36946	27734	1.332	0.001
216	844	141000	172445	2877	166788	178101	-31445	27654	-1.137	0.002
217	854	158000	153163	1950	149329	156997	4837	27735	0.174	0.000
218	864	132500	137031	1992	133115	140948	-4531	27732	-0.163	0.000
219	866	148500	129101	2314	124551	133651	19399	27707	0.700	0.001
220	871	109500	123235	2633	118057	128412	-13735	27678	-0.496	0.000
221	873	116000	124104	2583	119026	129182	-8104	27683	-0.293	0.000
222	874	133000	143549	1863	139885	147213	-10549	27741	-0.380	0.000
223	881	157000	118125	3032	112163	124087	38875	27637	1.407	0.004
224	885	100000	123126	2640	117936	128316	-23126	27678	-0.836	0.001

**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
225	887	145000	167665	2587	162578	172752	-22665	27683	-0.819	0.001
226	888	135500	132460	2848	126860	138060	3040	27657	0.110	0.000
227	889	268000	195095	4475	186295	203894	72905	27441	2.657	0.031
228	890	149500	156422	2050	152392	160452	-6922	27727	-0.250	0.000
229	891	122900	124864	2539	119871	129857	-1964	27687	-0.071	0.000
230	896	140000	172228	2863	166598	177857	-32228	27655	-1.165	0.002
231	901	110000	121279	2750	115871	126688	-11279	27667	-0.408	0.000
232	902	153000	145613	1854	141968	149258	7387	27741	0.266	0.000
233	906	128000	132414	2161	128165	136663	-4414	27719	-0.159	0.000
234	911	154300	198191	4710	188930	207451	-43891	27401	-1.602	0.013
235	913	88000	108441	4067	100445	116438	-20441	27504	-0.743	0.002
236	918	135000	124701	2821	119155	130248	10299	27660	0.372	0.000
237	920	176500	151479	1911	147721	155237	25021	27737	0.902	0.001
238	922	145900	170639	5857	159122	182157	-24739	27179	-0.910	0.006
239	932	117500	124919	2536	119932	129905	-7419	27687	-0.268	0.000
240	935	242000	187056	3880	179427	194685	54944	27531	1.996	0.013
241	936	79900	85082	5674	73924	96240	-5182	27218	-0.190	0.000
242	943	150000	134684	2911	128959	140408	15316	27650	0.554	0.001
243	947	143000	136814	1998	132884	140743	6186	27731	0.223	0.000
244	951	129000	121605	2731	116236	126974	7395	27669	0.267	0.000
245	955	127500	112921	3326	106381	119461	14579	27603	0.528	0.001
246	961	116500	94757	4912	85098	104416	21743	27366	0.795	0.003
247	968	135000	134315	2085	130216	138414	684.7812	27725	0.025	0.000
248	970	140000	134152	2091	130041	138263	5848	27724	0.211	0.000
249	971	135000	139421	1928	135629	143212	-4421	27736	-0.159	0.000
250	975	167500	195953	8587	179069	212837	-28453	26444	-1.076	0.020
251	977	85500	95716	4843	86193	105238	-10216	27378	-0.373	0.001
252	979	110000	108852	3615	101743	115961	1148	27567	0.042	0.000
253	981	178400	128938	2322	124372	133504	49462	27706	1.785	0.004
254	986	125000	121626	2895	115934	127318	3374	27652	0.122	0.000
255	993	187000	175215	3056	169207	181223	11785	27635	0.426	0.000
256	996	121600	127181	3660	119985	134378	-5581	27561	-0.203	0.000

**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
257	997	136500	131708	2192	127399	136017	4792	27717	0.173	0.000
258	1001	82000	111218	3442	104451	117985	-29218	27589	-1.059	0.003
259	1007	163500	164678	2421	159917	169438	-1178	27698	-0.043	0.000
260	1012	100000	145281	3492	138416	152147	-45281	27583	-1.642	0.007
261	1015	119200	133446	2118	129281	137612	-14246	27722	-0.514	0.000
262	1021	176000	120112	2948	114316	125908	55888	27646	2.022	0.008
263	1027	167500	143332	1865	139664	146999	24168	27741	0.871	0.001
264	1029	105000	149415	1877	145725	153106	-44415	27740	-1.601	0.002
265	1036	84000	106534	3799	99065	114003	-22534	27542	-0.818	0.002
266	1046	139600	148546	3741	141190	155901	-8946	27550	-0.325	0.000
267	1050	84900	110555	3489	103695	117415	-25655	27583	-0.930	0.002
268	1053	165000	182059	3522	175133	188985	-17059	27579	-0.619	0.001
269	1054	144500	138752	3085	132686	144818	5748	27631	0.208	0.000
270	1065	154000	137357	1982	133459	141254	16643	27732	0.600	0.000
271	1068	167900	162179	2294	157669	166689	5721	27708	0.206	0.000
272	1070	135000	123180	2636	117997	128364	11820	27678	0.427	0.000
273	1071	135000	131599	2196	127281	135918	3401	27716	0.123	0.000
274	1073	91500	135441	2938	129663	141218	-43941	27647	-1.589	0.005
275	1074	159500	134021	2890	128339	139704	25479	27653	0.921	0.002
276	1078	138800	134207	2089	130100	138314	4593	27725	0.166	0.000
277	1084	160000	142626	1873	138943	146308	17374	27740	0.626	0.000
278	1089	137500	147410	3651	140231	154589	-9910	27562	-0.360	0.000
279	1091	92900	131165	2216	126808	135522	-38265	27715	-1.381	0.002
280	1094	146000	139855	1919	136083	143628	6145	27737	0.222	0.000
281	1095	129000	125516	2503	120595	130437	3484	27690	0.126	0.000
282	1099	128000	135375	3828	127847	142902	-7375	27538	-0.268	0.000
283	1102	119500	126276	2461	121438	131115	-6776	27694	-0.245	0.000
284	1103	135000	136271	2016	132307	140234	-1271	27730	-0.046	0.000
285	1104	159500	139530	1926	135743	143316	19970	27736	0.720	0.000
286	1113	129900	118998	2893	113310	124686	10902	27652	0.394	0.000
287	1114	134500	129427	2298	124909	133945	5073	27708	0.183	0.000
288	1120	133700	131165	2216	126808	135522	2535	27715	0.091	0.000

**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
289	1123	112000	111975	3389	105311	118639	25.2679	27596	0.001	0.000
290	1124	118000	99579	4409	90909	108250	18421	27451	0.671	0.002
291	1126	115000	129264	2306	124730	133798	-14264	27707	-0.515	0.000
292	1136	102000	105914	4196	97664	114164	-3914	27485	-0.142	0.000
293	1137	119000	142680	1872	138999	146361	-23680	27740	-0.854	0.001
294	1140	144000	121690	3667	114480	128900	22310	27560	0.809	0.002
295	1141	139000	126385	2455	121558	131212	12615	27695	0.456	0.000
296	1145	80000	110272	3509	103371	117172	-30272	27581	-1.098	0.003
297	1146	149000	157340	5094	147324	167356	-8340	27333	-0.305	0.001
298	1151	124000	125299	2515	120354	130244	-1299	27689	-0.047	0.000
299	1152	149900	135914	2956	130101	141727	13986	27646	0.506	0.000
300	1155	201800	173531	2946	167739	179324	28269	27647	1.023	0.002
301	1157	179900	143386	1865	139719	147052	36514	27741	1.316	0.001
302	1169	235000	166287	5402	155664	176910	68713	27273	2.519	0.042
303	1172	163000	143169	1867	139498	146839	19831	27740	0.715	0.000
304	1180	93000	119734	2962	113909	125558	-26734	27645	-0.967	0.002
305	1186	104900	124323	2827	118763	129882	-19423	27659	-0.702	0.001
306	1201	116050	121605	2731	116236	126974	-5555	27669	-0.201	0.000
307	1203	117000	137467	3903	129792	145141	-20467	27528	-0.743	0.002
308	1209	140000	144364	1858	140711	148016	-4364	27741	-0.157	0.000
309	1213	113000	98349	4525	89452	107247	14651	27432	0.534	0.001
310	1215	134500	128938	2322	124372	133504	5562	27706	0.201	0.000
311	1219	80500	99464	4584	90450	108478	-18964	27423	-0.692	0.002
312	1221	115000	124212	2576	119147	129278	-9212	27684	-0.333	0.000
313	1223	143000	174943	3038	168971	180916	-31943	27637	-1.156	0.003
314	1224	137900	190695	4147	182541	198849	-52795	27492	-1.920	0.014
315	1226	145000	136488	2009	132538	140438	8512	27730	0.307	0.000
316	1228	147000	124212	2576	119147	129278	22788	27684	0.823	0.001
317	1230	127000	156530	2053	152493	160568	-29530	27727	-1.065	0.001
318	1232	132500	139312	1931	135516	143109	-6812	27736	-0.246	0.000
319	1233	101800	141159	1894	137436	144883	-39359	27739	-1.419	0.002
320	1234	142000	139204	1933	135402	143005	2796	27736	0.101	0.000

**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
321	1250	119000	128340	2352	123716	132965	-9340	27703	-0.337	0.000
322	1251	244000	189283	4043	181334	197232	54717	27508	1.989	0.014
323	1255	165400	144903	3464	138090	151715	20497	27586	0.743	0.001
324	1256	127500	139123	3971	131315	146930	-11623	27518	-0.422	0.001
325	1258	99900	107433	3726	100106	114760	-7533	27552	-0.273	0.000
326	1260	151000	131925	2182	127635	136216	19075	27717	0.688	0.000
327	1262	128900	131708	2192	127399	136017	-2808	27717	-0.101	0.000
328	1264	180500	178956	6951	165289	192623	1544	26920	0.057	0.000
329	1265	181000	147297	1857	143644	150949	33703	27741	1.215	0.001
330	1270	144000	157454	2087	153349	161558	-13454	27725	-0.485	0.000
331	1274	177000	130757	2815	125221	136293	46243	27660	1.672	0.005
332	1276	137000	178963	3307	172460	185466	-41963	27606	-1.520	0.006
333	1286	132500	143045	4158	134869	151221	-10545	27490	-0.384	0.001
334	1291	180500	137248	1985	133345	141152	43252	27732	1.560	0.002
335	1295	115000	107433	3726	100106	114760	7567	27552	0.275	0.000
336	1296	138500	131817	2187	127517	136117	6683	27717	0.241	0.000
337	1297	155000	135945	2026	131960	139929	19055	27729	0.687	0.000
338	1298	140000	117273	3073	111230	123317	22727	27633	0.822	0.001
339	1300	154000	142354	1876	138665	146043	11646	27740	0.420	0.000
340	1305	130000	147363	3647	140191	154535	-17363	27563	-0.630	0.001
341	1315	119000	111407	3428	104666	118148	7593	27591	0.275	0.000
342	1316	206900	189392	4051	181427	197356	17508	27506	0.637	0.001
343	1320	111000	111407	3428	104666	118148	-407.0093	27591	-0.015	0.000
344	1321	156500	154955	2001	151021	158889	1545	27731	0.056	0.000
345	1322	72500	82729	5874	71179	94278	-10229	27176	-0.376	0.001
346	1324	82500	81683	5964	69956	93409	817.4131	27156	0.030	0.000
347	1327	79000	103175	4084	95145	111205	-24175	27502	-0.879	0.003
348	1333	100000	105162	3912	97469	112855	-5162	27526	-0.188	0.000
349	1341	123000	122040	2704	116722	127357	960.1662	27671	0.035	0.000
350	1351	200000	217744	6229	205496	229992	-17744	27096	-0.655	0.004
351	1352	171000	167882	2600	162771	172994	3118	27681	0.113	0.000
352	1353	134900	122475	3660	115278	129671	12425	27561	0.451	0.001

**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
353	1357	110000	123126	2640	117936	128316	-13126	27678	-0.474	0.000
354	1358	149900	133229	2127	129046	137412	16671	27722	0.601	0.000
355	1363	104900	169077	2670	163828	174327	-64177	27675	-2.319	0.008
356	1372	165500	164895	2433	160112	169678	604.9504	27697	0.022	0.000
357	1378	117000	142443	3298	135958	148927	-25443	27607	-0.922	0.002
358	1381	58500	107433	3726	100106	114760	-48933	27552	-1.776	0.010
359	1382	237500	189663	4071	181659	197667	47837	27504	1.739	0.011
360	1385	105000	126073	2803	120562	131585	-21073	27661	-0.762	0.001
361	1390	131000	126135	3654	118952	133319	4865	27562	0.176	0.000
362	1392	124000	160713	2224	156339	165086	-36713	27714	-1.325	0.002
363	1393	123000	123561	2614	118421	128701	-560.6780	27680	-0.020	0.000
364	1398	137500	151848	4695	142617	161080	-14348	27404	-0.524	0.001
365	1399	138000	178094	3248	171707	184480	-40094	27613	-1.452	0.005
366	1401	120000	120906	3676	113678	128134	-905.7265	27559	-0.033	0.000
367	1412	140000	165275	2453	160452	170099	-25275	27695	-0.913	0.001
368	1413	90000	131165	2216	126808	135522	-41165	27715	-1.485	0.002
369	1415	207000	181048	7146	166997	195099	25952	26869	0.966	0.011
370	1419	124000	136814	1998	132884	140743	-12814	27731	-0.462	0.000
371	1424	274970	170687	5862	159160	182214	104283	27178	3.837	0.114
372	1425	144000	147677	1860	144020	151334	-3677	27741	-0.133	0.000
373	1426	142000	142680	1872	138999	146361	-679.8617	27740	-0.025	0.000
374	1428	140000	159301	2162	155050	163551	-19301	27719	-0.696	0.000
375	1436	174000	158160	2115	154001	162318	15840	27723	0.571	0.000
376	1437	120500	121605	2731	116236	126974	-1105	27669	-0.040	0.000
377	1444	121000	102950	4364	94369	111532	18050	27458	0.657	0.002
378	1449	112000	130236	2808	124714	135759	-18236	27661	-0.659	0.001
379	1451	136000	172010	2849	166408	177613	-36010	27657	-1.302	0.003
380	1453	145000	117273	3073	111230	123317	27727	27633	1.003	0.002
381	1459	142125	133229	2127	129046	137412	8896	27722	0.321	0.000
382	1460	147500	125979	2804	120465	131492	21521	27661	0.778	0.001

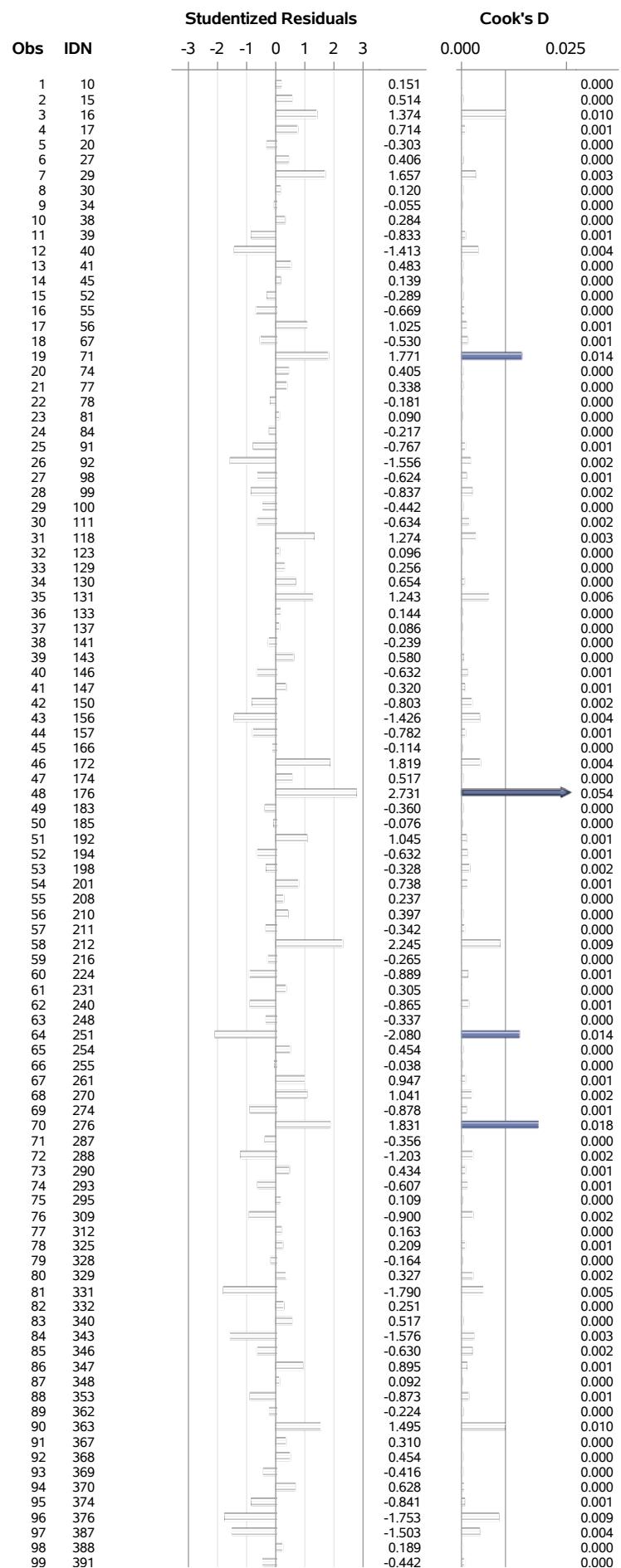
**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

The REG Procedure

Model: MODEL1

Dependent Variable: SalePrice

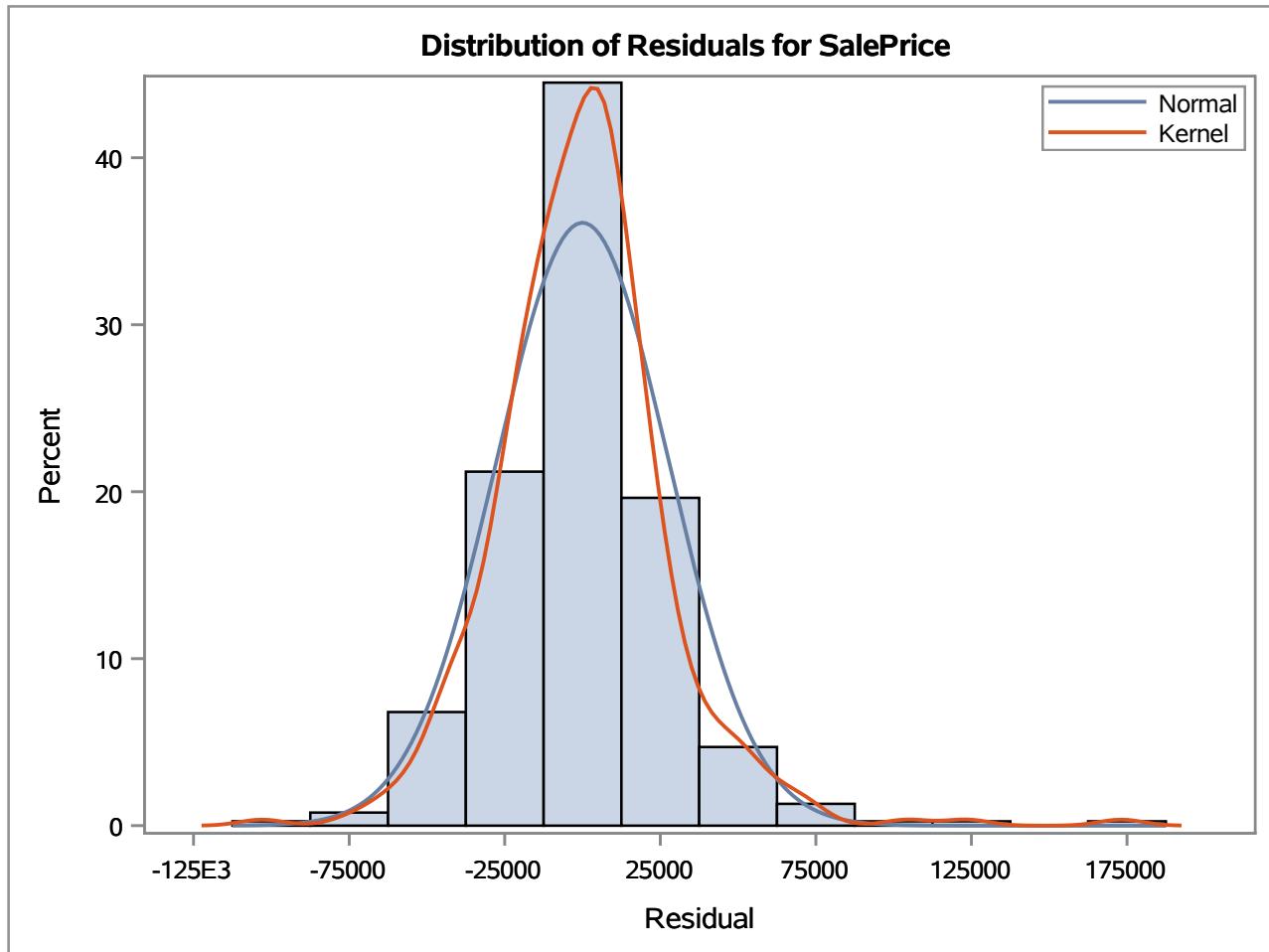
### Studentized Residuals and Cook's D for SalePrice



**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

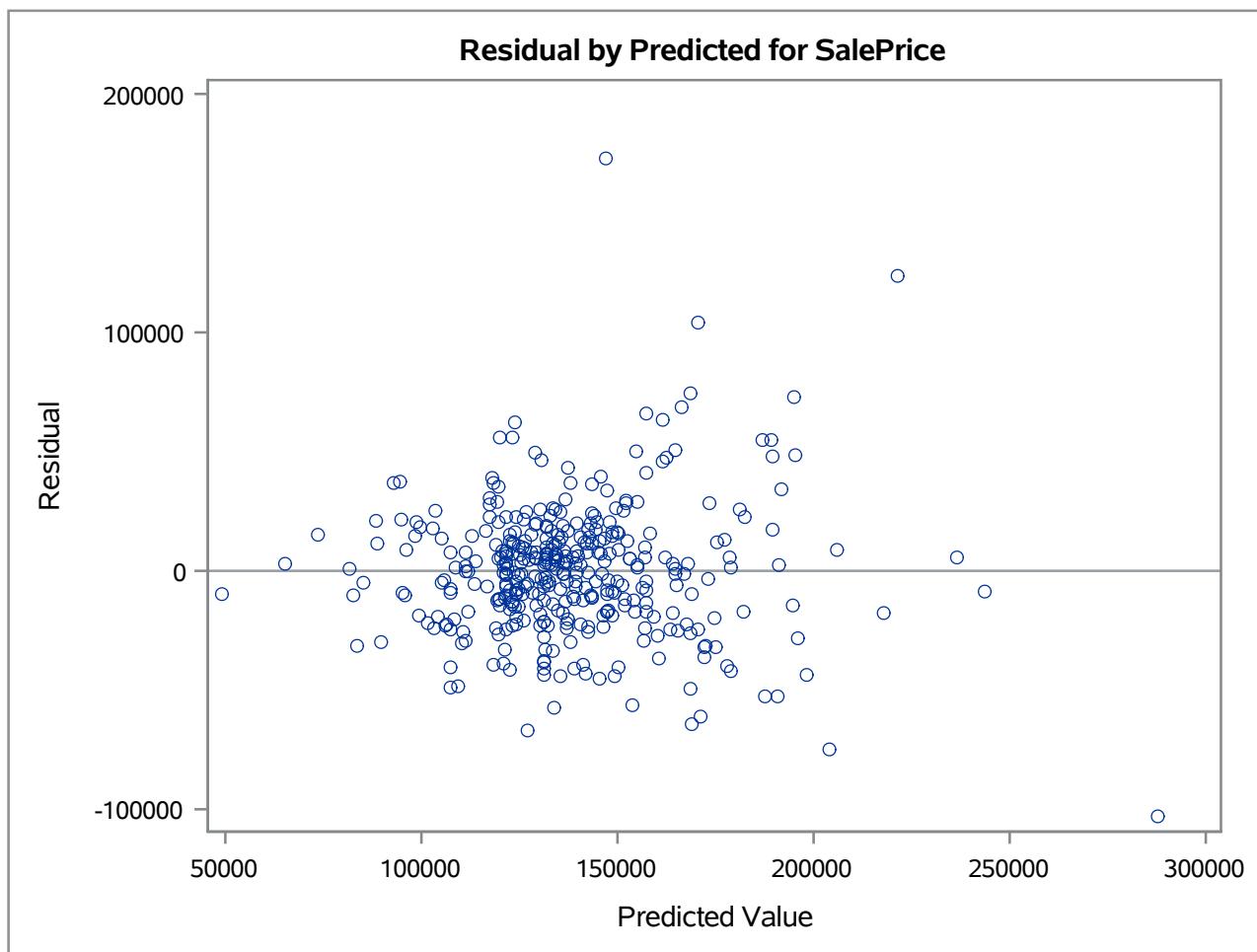
**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Sum of Residuals	0
Sum of Squared Residuals	2.906534E11
Predicted Residual SS (PRESS)	3.325503E11



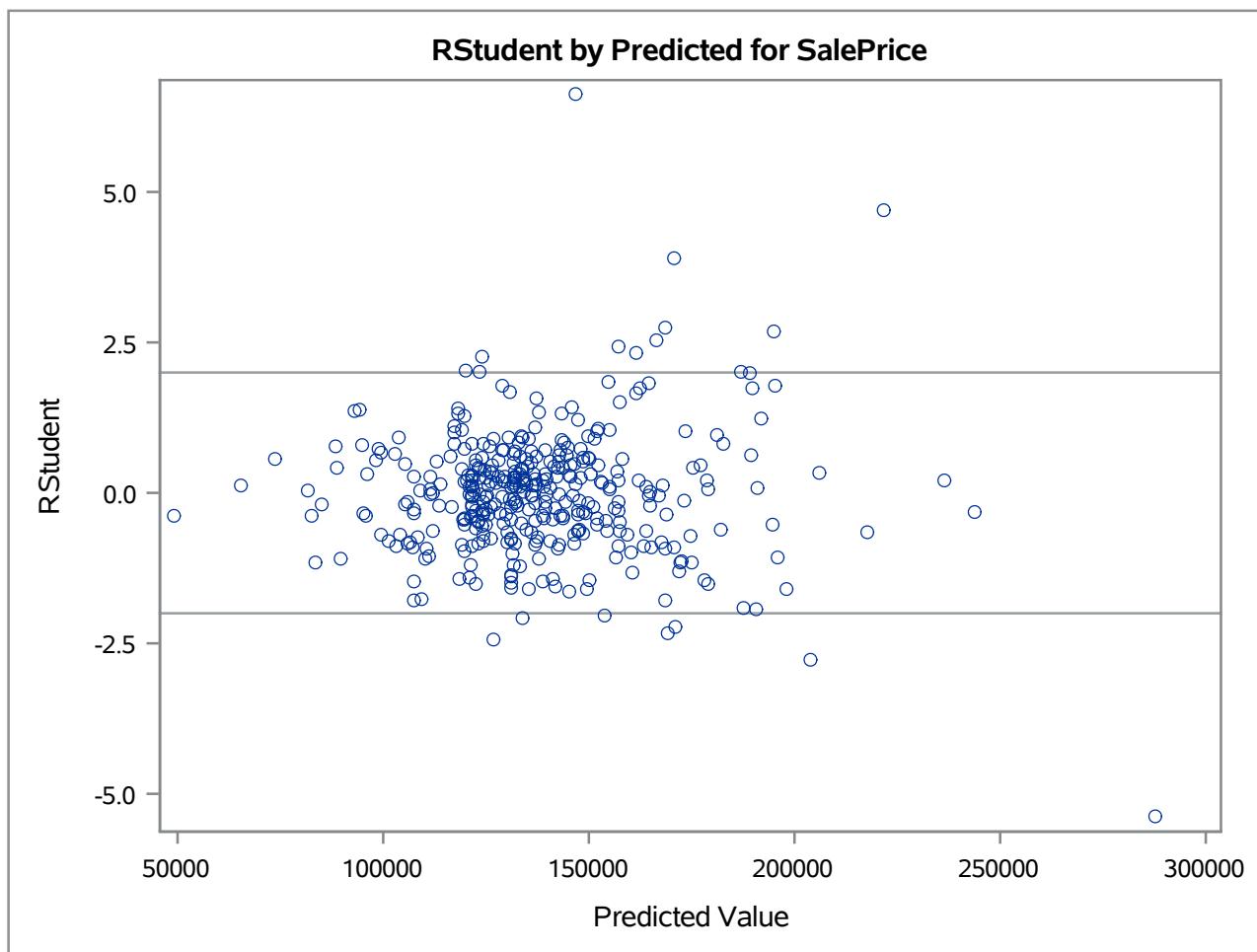
**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

The REG Procedure  
Model: MODEL1



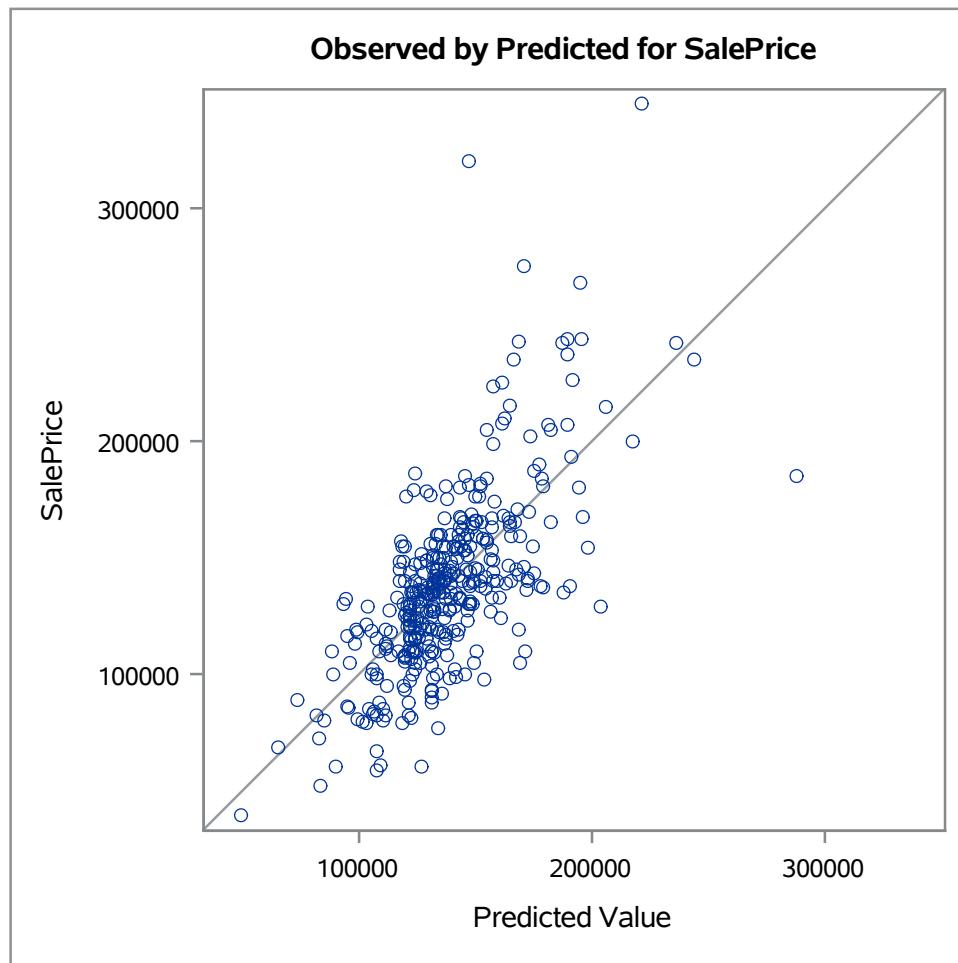
**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

The REG Procedure  
Model: MODEL1



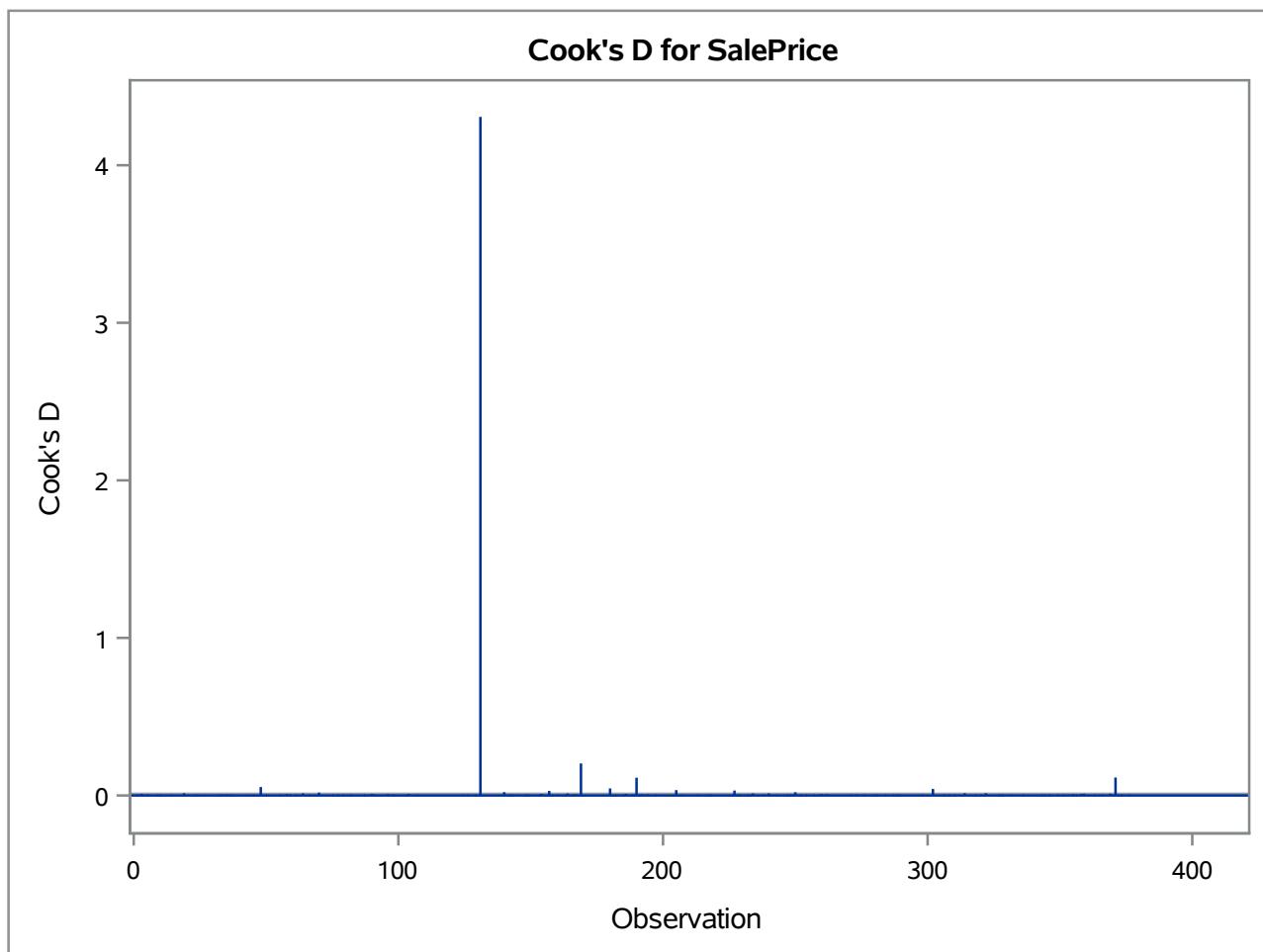
**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

The REG Procedure  
Model: MODEL1



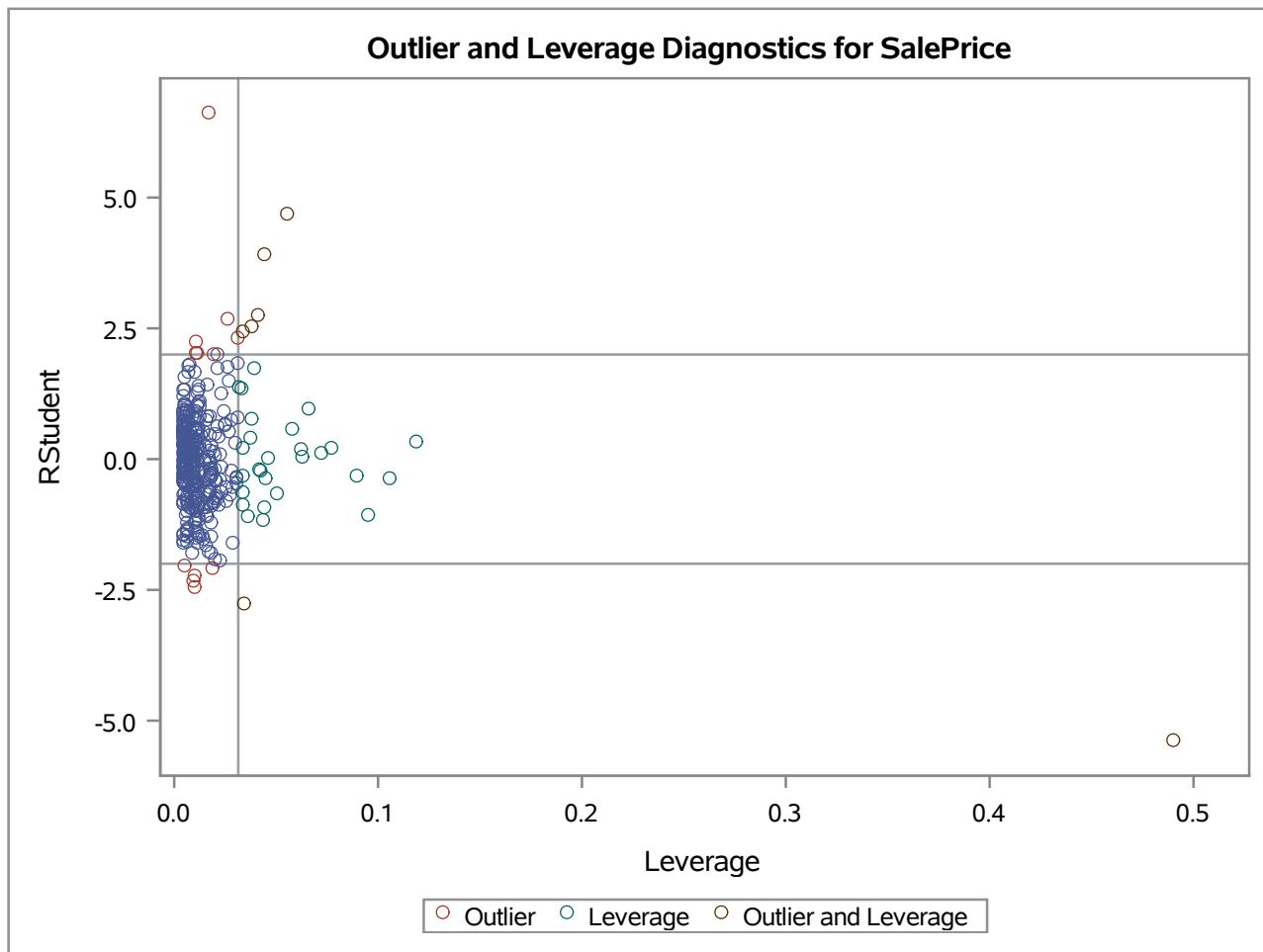
**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

The REG Procedure  
Model: MODEL1



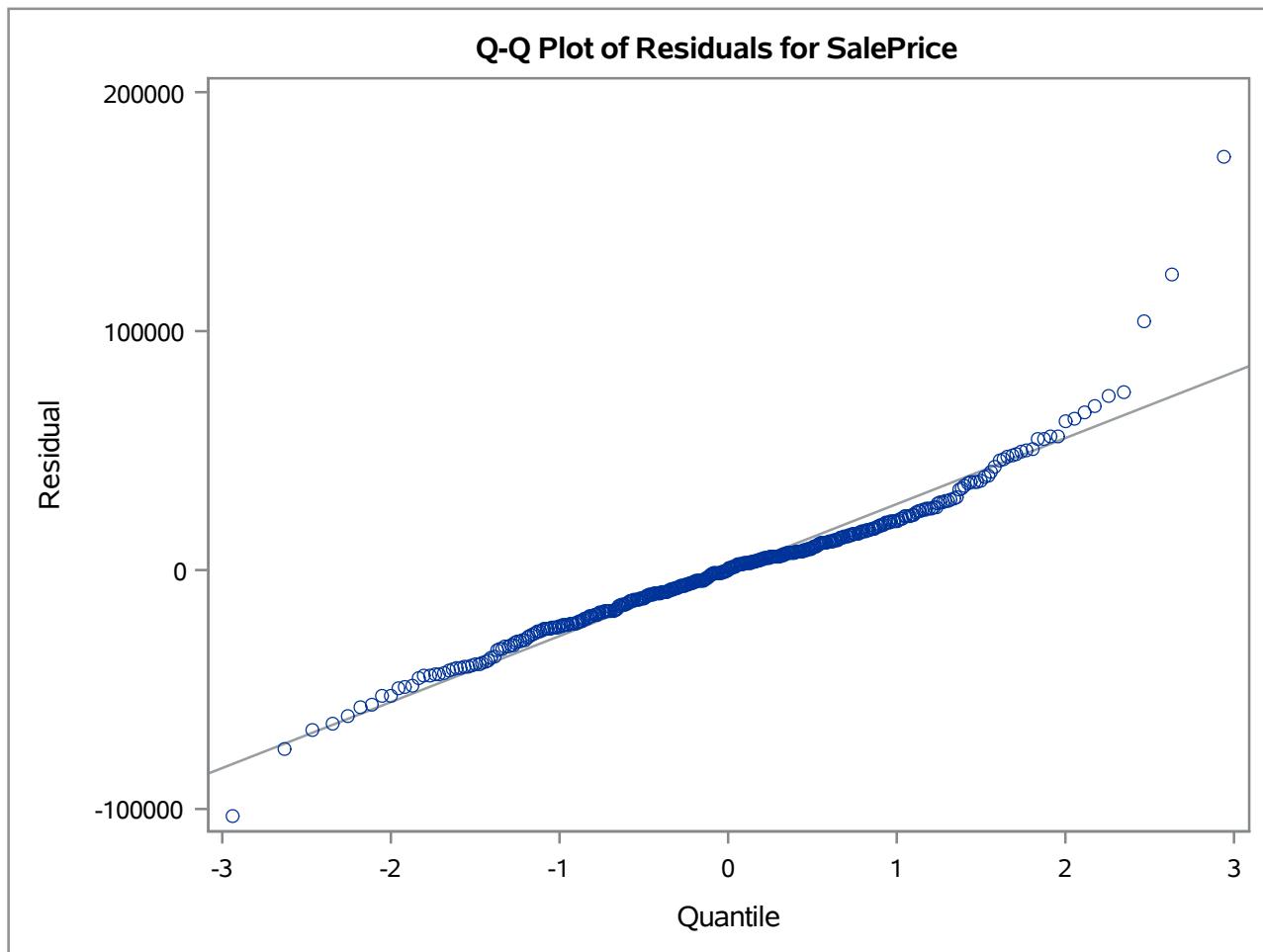
**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

The REG Procedure  
Model: MODEL1



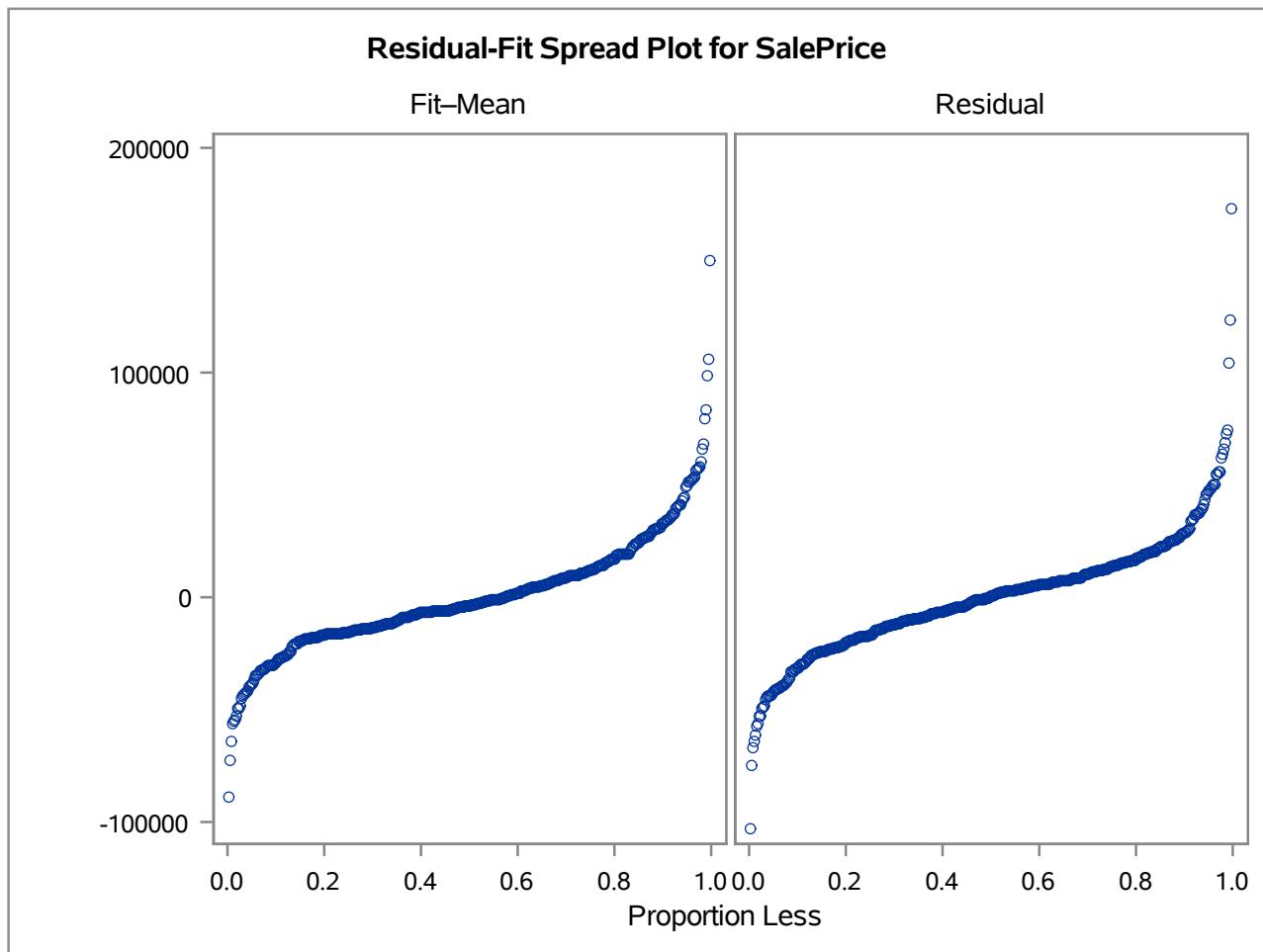
**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

The REG Procedure  
Model: MODEL1



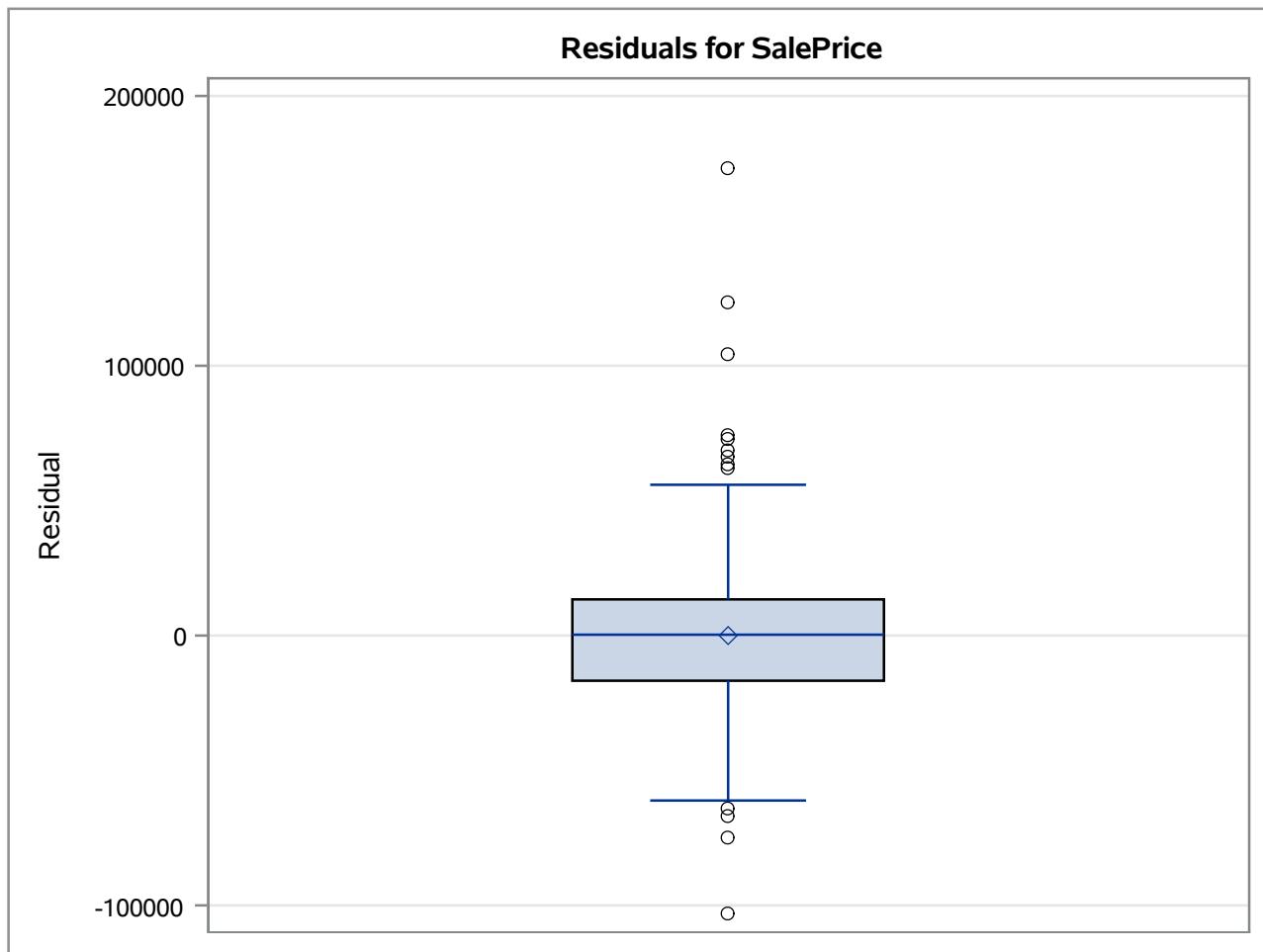
**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

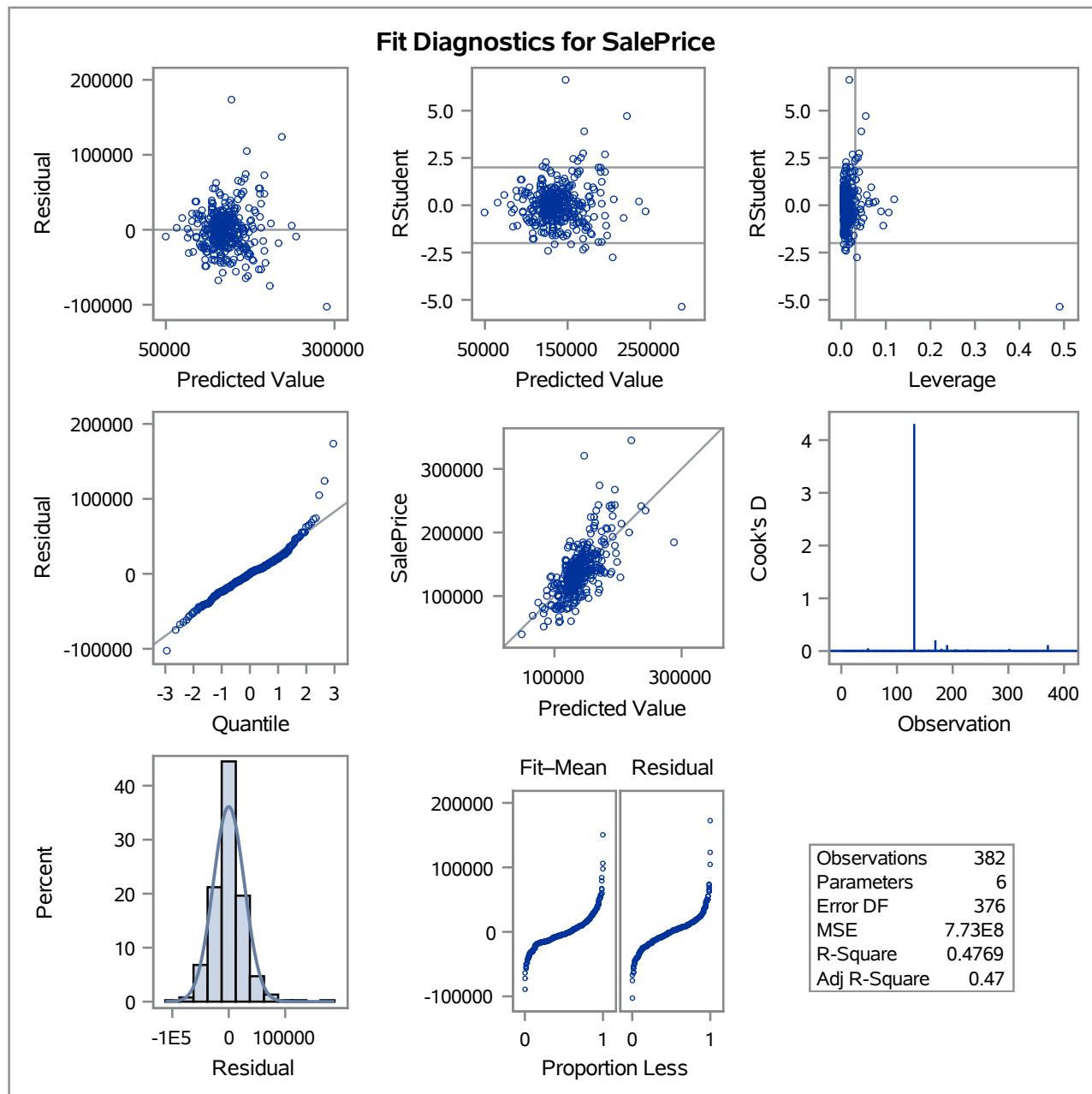
The REG Procedure  
Model: MODEL1



**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

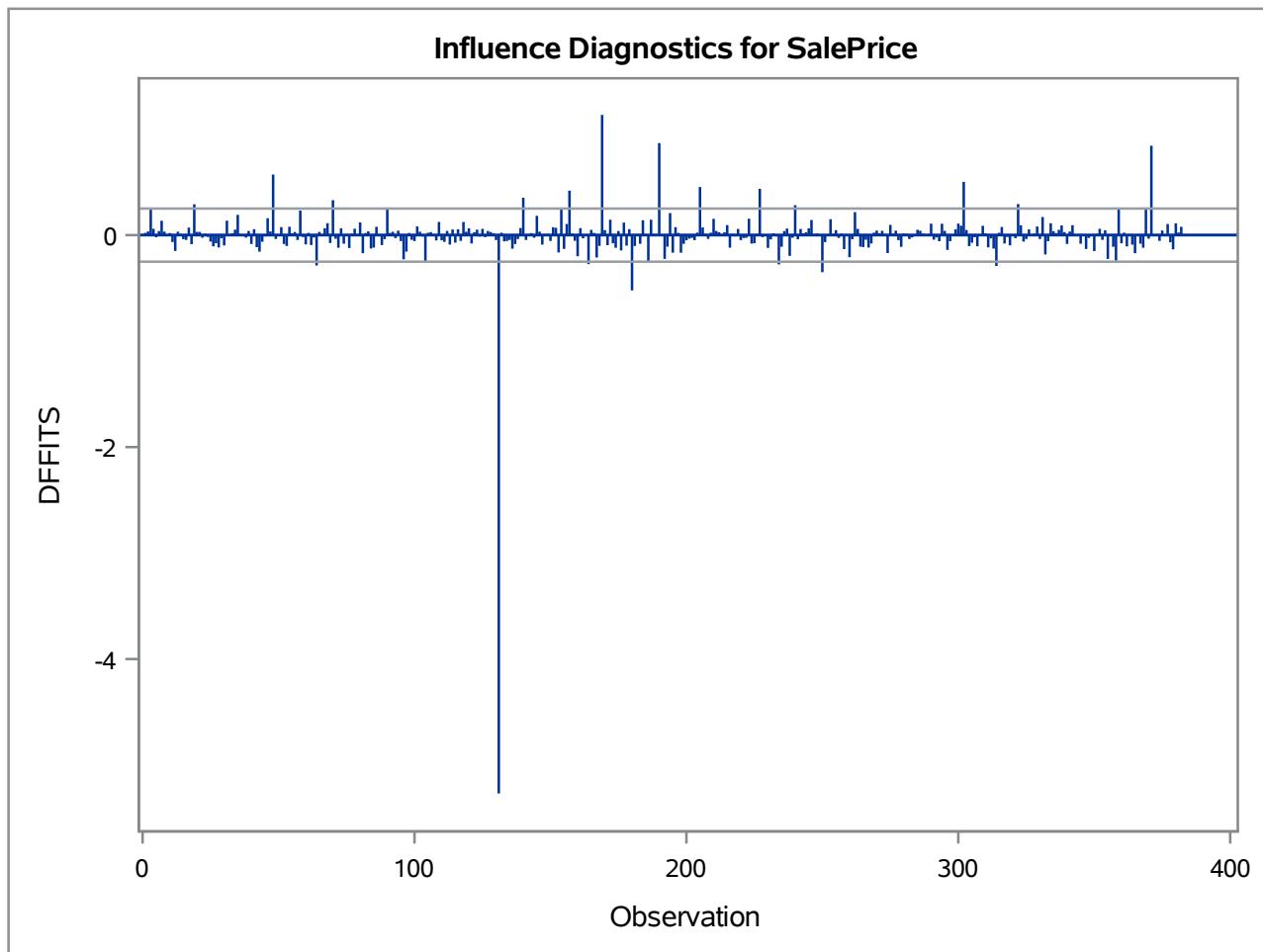
The REG Procedure  
Model: MODEL1



**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299****The REG Procedure  
Model: MODEL1**

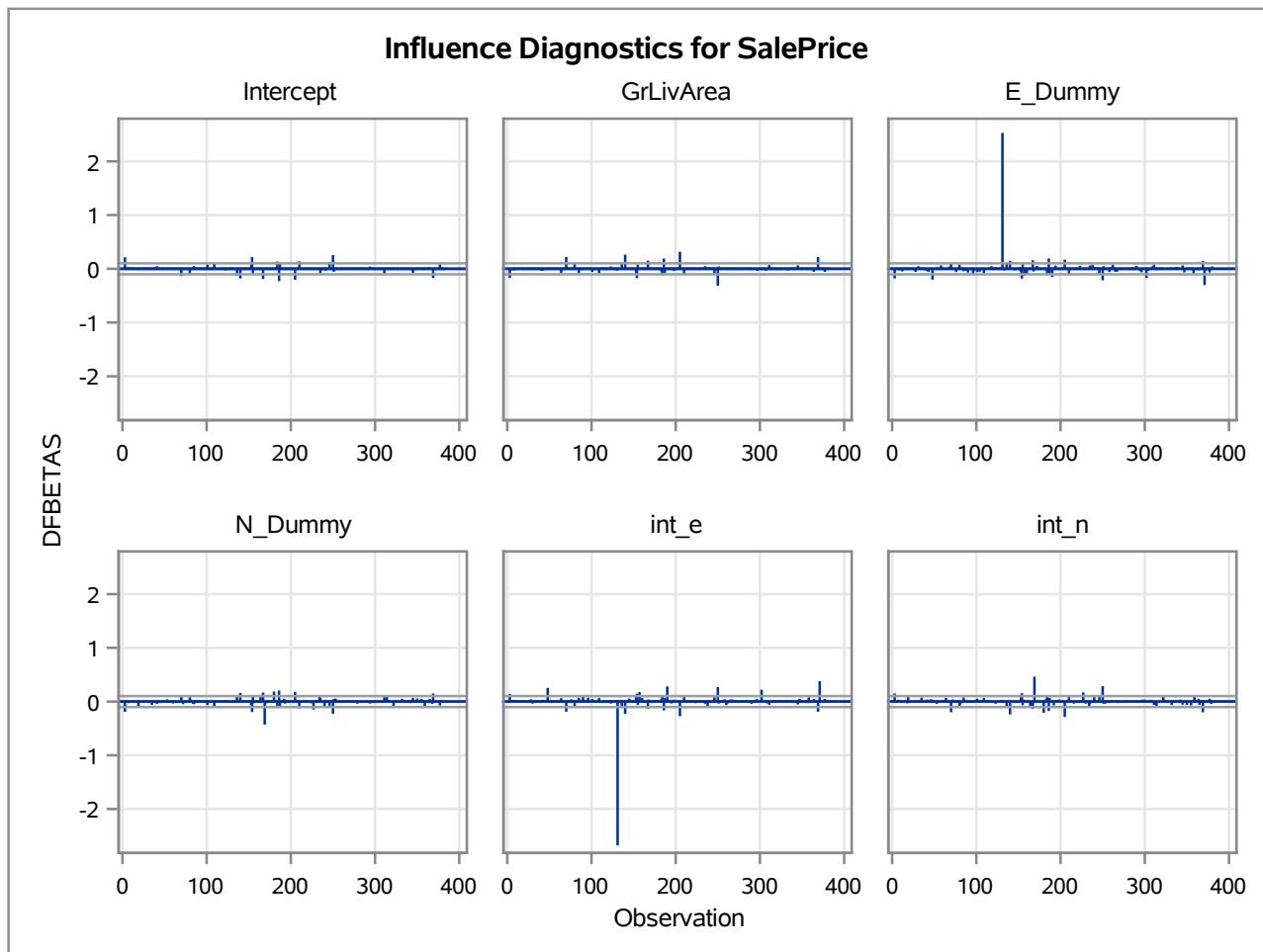
**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

The REG Procedure  
Model: MODEL1



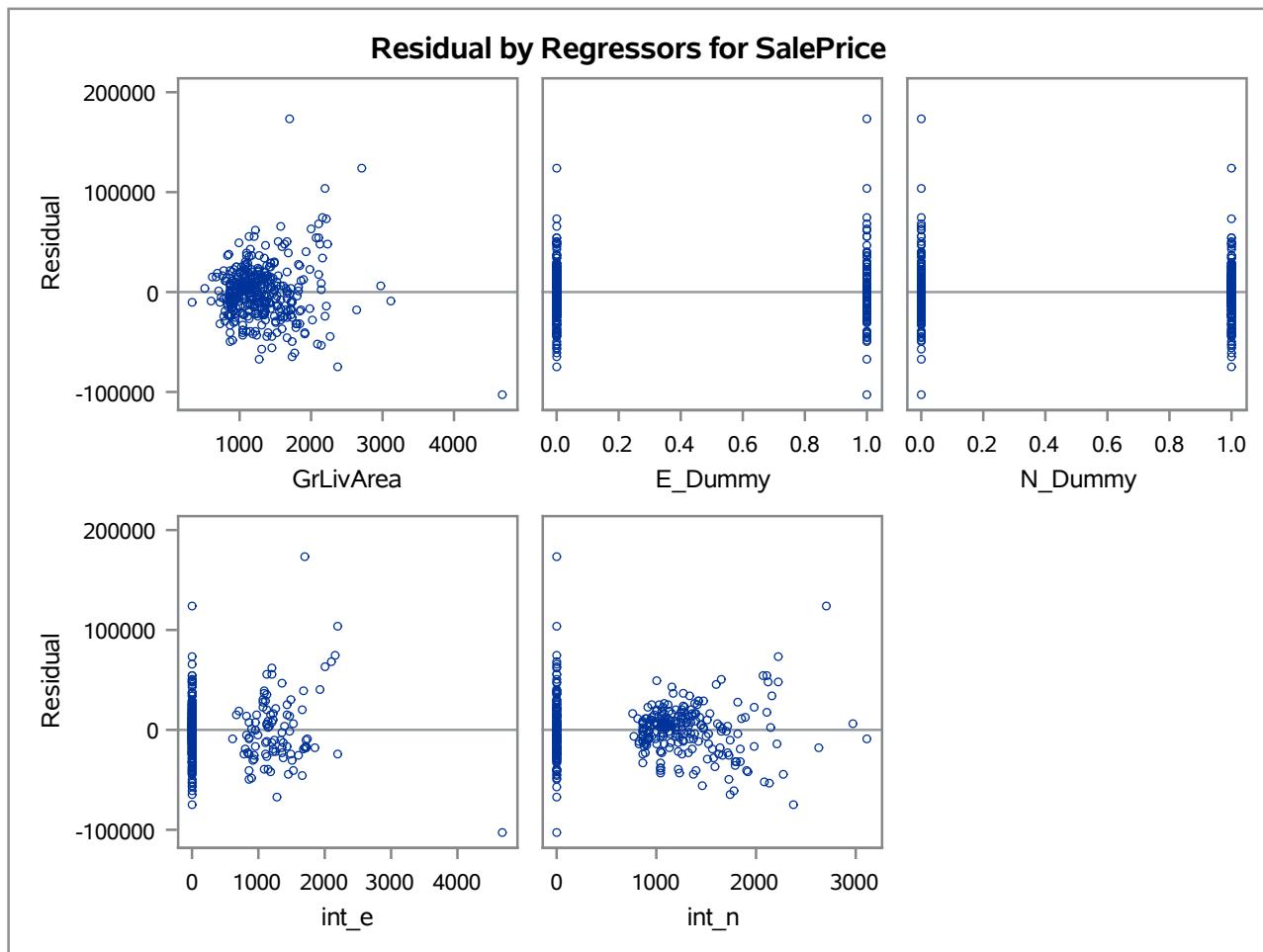
**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

The REG Procedure  
Model: MODEL1



**Linear-Linear MLR with Dummy and Interactions w/o Influential Point 1299**

The REG Procedure  
Model: MODEL1



## Log-Linear MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Number of Observations Read	383
Number of Observations Used	383

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
<b>Model</b>	5	13.31148	2.66230	65.79	<.0001
<b>Error</b>	377	15.25484	0.04046		
<b>Corrected Total</b>	382	28.56633			

Root MSE	0.20116	R-Square	0.4660
Dependent Mean	11.79887	Adj R-Sq	0.4589
Coeff Var	1.70488		

Parameter Estimates								
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr >  t	Variance Inflation	95% Confidence Limits	
<b>Intercept</b>	1	10.79159	0.08702	124.02	<.0001	0	10.62050	10.96269
<b>GrLivArea</b>	1	0.00073822	0.00006892	10.71	<.0001	10.56925	0.00060272	0.00087373
<b>E_Dummy</b>	1	0.63035	0.09842	6.40	<.0001	17.68756	0.43683	0.82386
<b>N_Dummy</b>	1	0.65175	0.09780	6.66	<.0001	21.94238	0.45944	0.84406
<b>int_e</b>	1	-0.00052153	0.00007551	-6.91	<.0001	24.68414	-0.00067000	-0.00037307
<b>int_n</b>	1	-0.00041410	0.00007620	-5.43	<.0001	28.36139	-0.00056392	-0.00026428

## Log-Linear MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
1	10	11.7	11.5867	0.0278	11.5320	11.6413	0.0918	0.199	0.461	0.001
2	15	12.0	11.8495	0.0135	11.8228	11.8761	0.1145	0.201	0.571	0.000
3	16	11.8	11.4220	0.0357	11.3518	11.4923	0.3685	0.198	1.862	0.019
4	17	11.9	11.7688	0.0167	11.7359	11.8016	0.1429	0.200	0.713	0.001
5	20	11.8	11.8773	0.0134	11.8509	11.9038	-0.0351	0.201	-0.175	0.000
6	27	11.8	11.7351	0.0189	11.6979	11.7722	0.0765	0.200	0.382	0.000
7	29	12.2	11.9619	0.0164	11.9297	11.9942	0.2809	0.200	1.401	0.002
8	30	11.1	11.1755	0.0540	11.0693	11.2816	-0.0409	0.194	-0.211	0.001
9	34	12.0	11.9944	0.0184	11.9581	12.0306	0.0224	0.200	0.112	0.000
10	38	11.9	11.8637	0.0134	11.8373	11.8901	0.0745	0.201	0.371	0.000
11	39	11.6	11.7859	0.0157	11.7550	11.8169	-0.1868	0.201	-0.932	0.001
12	40	11.3	11.6716	0.0209	11.6304	11.7127	-0.3571	0.200	-1.785	0.006
13	41	12.0	11.8725	0.0134	11.8461	11.8989	0.1104	0.201	0.550	0.000
14	45	11.9	11.8161	0.0144	11.7878	11.8444	0.0404	0.201	0.202	0.000
15	52	11.6	11.6597	0.0265	11.6077	11.7118	-0.0114	0.199	-0.057	0.000
16	55	11.8	11.8842	0.0135	11.8576	11.9107	-0.1089	0.201	-0.542	0.000
17	56	12.1	11.9052	0.0139	11.8778	11.9326	0.1983	0.201	0.988	0.001
18	67	12.1	12.1587	0.0321	12.0956	12.2218	-0.0580	0.199	-0.292	0.000
19	71	12.4	12.1639	0.0326	12.0999	12.2279	0.2411	0.199	1.214	0.007
20	74	11.9	11.7953	0.0153	11.7653	11.8254	0.0885	0.201	0.441	0.000
21	77	11.8	11.7519	0.0178	11.7170	11.7868	0.0667	0.200	0.333	0.000
22	78	11.8	11.7402	0.0270	11.6871	11.7933	0.0117	0.199	0.059	0.000
23	81	12.2	12.1376	0.0302	12.0783	12.1970	0.0354	0.199	0.178	0.000
24	84	11.7	11.7885	0.0156	11.7579	11.8192	-0.0405	0.201	-0.202	0.000
25	91	11.6	11.7804	0.0160	11.7489	11.8120	-0.1731	0.201	-0.863	0.001
26	92	11.5	11.8436	0.0136	11.8168	11.8704	-0.3448	0.201	-1.718	0.002
27	98	11.5	11.6300	0.0233	11.5842	11.6757	-0.1710	0.200	-0.856	0.002
28	99	11.3	11.6029	0.0254	11.5528	11.6529	-0.2763	0.200	-1.385	0.005
29	100	11.8	11.8404	0.0137	11.8135	11.8673	-0.0732	0.201	-0.365	0.000
30	111	11.8	11.8239	0.0256	11.7735	11.8743	0.003108	0.200	0.016	0.000
31	118	12.0	11.6657	0.0212	11.6241	11.7074	0.2855	0.200	1.427	0.004
32	123	11.8	11.7934	0.0154	11.7632	11.8236	0.0270	0.201	0.135	0.000

## Log-Linear MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

<b>Output Statistics</b>										
<b>Obs</b>	<b>Id</b>	<b>Dependent Variable</b>	<b>Predicted Value</b>	<b>Std Error Mean Predict</b>	<b>95% CL Mean</b>		<b>Residual</b>	<b>Std Error Residual</b>	<b>Student Residual</b>	<b>Cook's D</b>
33	129	12.0	11.8803	0.0135	11.8538	11.9067	0.0709	0.201	0.353	0.000
34	130	11.9	11.7846	0.0158	11.7536	11.8157	0.1337	0.201	0.667	0.000
35	131	12.3	12.1425	0.0306	12.0823	12.2027	0.1858	0.199	0.935	0.003
36	133	11.9	11.8735	0.0134	11.8471	11.8998	0.0499	0.201	0.249	0.000
37	137	11.9	11.8368	0.0138	11.8098	11.8639	0.0338	0.201	0.168	0.000
38	141	11.7	11.7234	0.0198	11.6845	11.7622	-0.0707	0.200	-0.353	0.000
39	143	12.0	11.8923	0.0136	11.8655	11.9191	0.1275	0.201	0.635	0.000
40	146	11.8	11.7923	0.0231	11.7468	11.8377	-0.0170	0.200	-0.085	0.000
41	147	11.6	11.4375	0.0348	11.3692	11.5059	0.1242	0.198	0.627	0.002
42	150	11.7	11.7838	0.0281	11.7284	11.8391	-0.1311	0.199	-0.658	0.001
43	156	11.3	11.6594	0.0215	11.6172	11.7017	-0.3822	0.200	-1.911	0.007
44	157	11.6	11.7804	0.0160	11.7489	11.8120	-0.1768	0.201	-0.881	0.001
45	166	11.8	11.7156	0.0201	11.6760	11.7551	0.0403	0.200	0.201	0.000
46	172	12.3	11.9801	0.0175	11.9457	12.0145	0.2983	0.200	1.489	0.003
47	174	12.0	11.8848	0.0135	11.8582	11.9114	0.1167	0.201	0.581	0.000
48	176	12.4	11.8896	0.0323	11.8261	11.9530	0.5113	0.199	2.575	0.029
49	183	11.7	11.7123	0.0201	11.6728	11.7519	-0.0171	0.200	-0.085	0.000
50	185	11.8	11.7158	0.0266	11.6635	11.7682	0.0361	0.199	0.181	0.000
51	192	12.1	11.9227	0.0145	11.8942	11.9512	0.2000	0.201	0.997	0.001
52	194	11.8	11.7923	0.0231	11.7468	11.8377	-0.0170	0.200	-0.085	0.000
53	198	12.4	12.4520	0.0601	12.3339	12.5701	-0.0847	0.192	-0.441	0.003
54	201	11.8	11.6648	0.0212	11.6231	11.7066	0.1845	0.200	0.923	0.002
55	208	11.9	11.7999	0.0151	11.7703	11.8295	0.0566	0.201	0.282	0.000
56	210	11.9	11.7973	0.0152	11.7675	11.8271	0.0872	0.201	0.435	0.000
57	211	11.5	11.6092	0.0249	11.5602	11.6581	-0.1164	0.200	-0.583	0.001
58	212	12.1	11.6846	0.0205	11.6443	11.7249	0.4489	0.200	2.243	0.009
59	216	11.8	11.8440	0.0136	11.8172	11.8708	-0.0350	0.201	-0.174	0.000
60	224	11.5	11.7234	0.0198	11.6845	11.7622	-0.2409	0.200	-1.203	0.002
61	231	11.9	11.8303	0.0139	11.8029	11.8577	0.0746	0.201	0.372	0.000
62	240	11.6	11.7442	0.0206	11.7036	11.7847	-0.1090	0.200	-0.545	0.001
63	248	11.8	11.8890	0.0136	11.8623	11.9157	-0.0396	0.201	-0.197	0.000
64	251	11.2	11.7557	0.0273	11.7019	11.8095	-0.5107	0.199	-2.562	0.021

## Log-Linear MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

<b>Output Statistics</b>										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
65	254	12.0	11.8654	0.0134	11.8390	11.8917	0.1050	0.201	0.523	0.000
66	255	11.9	11.8692	0.0134	11.8429	11.8956	0.0152	0.201	0.076	0.000
67	261	12.1	11.8913	0.0136	11.8645	11.9180	0.1870	0.201	0.932	0.001
68	270	11.9	11.6631	0.0213	11.6212	11.7050	0.2419	0.200	1.209	0.003
69	274	11.8	11.9723	0.0170	11.9389	12.0057	-0.1301	0.200	-0.649	0.001
70	276	12.2	11.9344	0.0355	11.8645	12.0042	0.2964	0.198	1.497	0.012
71	287	12.0	12.0054	0.0192	11.9676	12.0432	-0.0287	0.200	-0.143	0.000
72	288	11.4	11.7214	0.0199	11.6823	11.7606	-0.3363	0.200	-1.680	0.005
73	290	11.9	11.8222	0.0296	11.7640	11.8803	0.1198	0.199	0.602	0.001
74	293	11.8	11.7938	0.0232	11.7481	11.8394	-0.0108	0.200	-0.054	0.000
75	295	12.0	11.9762	0.0172	11.9423	12.0101	0.0495	0.200	0.247	0.000
76	309	11.3	11.6085	0.0250	11.5594	11.6576	-0.2880	0.200	-1.443	0.005
77	312	11.8	11.7584	0.0173	11.7243	11.7925	0.0322	0.200	0.161	0.000
78	325	12.4	12.4086	0.0558	12.2988	12.5184	-0.0119	0.193	-0.062	0.000
79	328	11.9	11.8916	0.0136	11.8648	11.9184	-0.005393	0.201	-0.027	0.000
80	329	12.3	12.3670	0.0694	12.2305	12.5034	-0.0909	0.189	-0.481	0.005
81	331	11.7	12.0034	0.0191	11.9659	12.0410	-0.3165	0.200	-1.581	0.004
82	332	11.8	11.7856	0.0158	11.7546	11.8166	0.0566	0.201	0.282	0.000
83	340	12.0	11.8372	0.0138	11.8101	11.8642	0.1140	0.201	0.568	0.000
84	343	11.4	11.7804	0.0160	11.7489	11.8120	-0.4010	0.201	-2.000	0.004
85	346	11.9	11.9558	0.0369	11.8832	12.0283	-0.1049	0.198	-0.531	0.002
86	347	11.9	11.7539	0.0176	11.7192	11.7885	0.1745	0.200	0.871	0.001
87	348	12.0	11.9224	0.0145	11.8939	11.9509	0.0448	0.201	0.223	0.000
88	353	11.5	11.6627	0.0213	11.6208	11.7046	-0.2010	0.200	-1.005	0.002
89	362	11.9	11.9026	0.0336	11.8365	11.9687	-0.0181	0.198	-0.091	0.000
90	363	12.2	11.8384	0.0270	11.7854	11.8914	0.3601	0.199	1.807	0.010
91	367	12.0	11.8952	0.0137	11.8683	11.9221	0.0815	0.201	0.406	0.000
92	368	12.0	11.9072	0.0140	11.8797	11.9346	0.1065	0.201	0.531	0.000
93	369	11.8	11.8543	0.0135	11.8278	11.8808	-0.0638	0.201	-0.318	0.000
94	370	12.0	11.8605	0.0134	11.8341	11.8869	0.1349	0.201	0.672	0.000
95	374	11.7	11.8709	0.0134	11.8445	11.8972	-0.1509	0.201	-0.752	0.000
96	376	11.0	11.6178	0.0242	11.5702	11.6654	-0.5992	0.200	-3.001	0.022

## Log-Linear MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
97	387	11.3	11.6785	0.0207	11.6378	11.7192	-0.3763	0.200	-1.881	0.006
98	388	11.7	11.6657	0.0212	11.6241	11.7074	0.0704	0.200	0.352	0.000
99	391	11.7	11.7182	0.0201	11.6786	11.7577	-0.0313	0.200	-0.156	0.000
100	393	11.6	11.7292	0.0193	11.6912	11.7672	-0.1533	0.200	-0.766	0.001
101	394	11.5	11.3733	0.0389	11.2968	11.4499	0.1396	0.197	0.707	0.003
102	396	11.8	11.6698	0.0210	11.6285	11.7111	0.0977	0.200	0.489	0.000
103	398	12.0	12.0307	0.0211	11.9891	12.0722	0.009954	0.200	0.050	0.000
104	411	11.0	11.6984	0.0202	11.6587	11.7382	-0.6963	0.200	-3.479	0.021
105	419	11.7	11.6677	0.0211	11.6262	11.7091	0.0764	0.200	0.382	0.000
106	420	11.9	11.7856	0.0158	11.7546	11.8166	0.0780	0.201	0.389	0.000
107	425	11.8	11.8310	0.0139	11.8036	11.8584	0.0112	0.201	0.056	0.000
108	428	11.6	11.7373	0.0188	11.7004	11.7742	-0.1381	0.200	-0.690	0.001
109	438	11.7	11.4589	0.0335	11.3931	11.5248	0.2279	0.198	1.149	0.006
110	440	11.6	11.6811	0.0206	11.6406	11.7216	-0.0729	0.200	-0.364	0.000
111	442	11.7	11.7340	0.0204	11.6940	11.7740	-0.0555	0.200	-0.277	0.000
112	443	12.0	11.9528	0.0367	11.8806	12.0250	0.0481	0.198	0.243	0.000
113	446	11.8	11.7879	0.0228	11.7431	11.8328	-0.0321	0.200	-0.160	0.000
114	447	12.2	12.0553	0.0231	12.0099	12.1007	0.0995	0.200	0.498	0.001
115	460	11.6	11.6797	0.0264	11.6277	11.7316	-0.0714	0.199	-0.358	0.000
116	467	12.0	11.8572	0.0135	11.8308	11.8837	0.1685	0.201	0.840	0.001
117	468	11.9	11.9762	0.0172	11.9423	12.0101	-0.0814	0.200	-0.406	0.000
118	473	11.9	11.6542	0.0217	11.6115	11.6970	0.2507	0.200	1.254	0.003
119	486	11.9	11.8041	0.0149	11.7749	11.8333	0.0941	0.201	0.469	0.000
120	487	12.0	11.7911	0.0155	11.7607	11.8215	0.1665	0.201	0.830	0.001
121	492	11.8	11.9548	0.0160	11.9234	11.9862	-0.1567	0.201	-0.781	0.001
122	494	12.0	11.8547	0.0135	11.8282	11.8812	0.0965	0.201	0.481	0.000
123	498	12.1	12.1352	0.0501	12.0367	12.2336	-0.0125	0.195	-0.064	0.000
124	500	11.7	11.7389	0.0186	11.7023	11.7756	-0.0437	0.200	-0.218	0.000
125	503	11.8	11.6850	0.0205	11.6447	11.7253	0.1644	0.200	0.822	0.001
126	510	11.7	11.7808	0.0160	11.7493	11.8122	-0.0487	0.201	-0.243	0.000
127	511	12.0	11.8851	0.0135	11.8585	11.9117	0.1280	0.201	0.638	0.000
128	513	11.8	11.7234	0.0198	11.6845	11.7622	0.0511	0.200	0.255	0.000

## Log-Linear MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
129	522	11.9	11.8466	0.0136	11.8198	11.8733	0.0718	0.201	0.358	0.000
130	523	12.0	12.0200	0.0413	11.9388	12.1012	-0.0433	0.197	-0.220	0.000
131	524	12.1	12.4352	0.1049	12.2290	12.6414	-0.3084	0.172	-1.797	0.201
132	527	11.8	11.7441	0.0183	11.7082	11.7801	0.0464	0.200	0.232	0.000
133	529	11.4	11.5530	0.0303	11.4934	11.6126	-0.1909	0.199	-0.960	0.004
134	532	11.8	11.7971	0.0286	11.7408	11.8533	-0.0373	0.199	-0.187	0.000
135	533	11.6	11.7114	0.0207	11.6708	11.7520	-0.1261	0.200	-0.630	0.001
136	534	10.6	11.0382	0.0655	10.9095	11.1669	-0.4592	0.190	-2.414	0.115
137	536	11.6	11.7138	0.0201	11.6743	11.7534	-0.1286	0.200	-0.642	0.001
138	538	11.6	11.7234	0.0198	11.6845	11.7622	-0.1038	0.200	-0.519	0.000
139	544	11.8	11.6919	0.0222	11.6483	11.7355	0.1062	0.200	0.531	0.001
140	547	12.3	11.9986	0.0398	11.9203	12.0768	0.2563	0.197	1.300	0.011
141	554	11.6	11.6659	0.0212	11.6243	11.7076	-0.0760	0.200	-0.380	0.000
142	556	11.6	11.5653	0.0285	11.5092	11.6213	0.0699	0.199	0.351	0.000
143	557	11.9	11.7973	0.0152	11.7675	11.8271	0.0592	0.201	0.295	0.000
144	563	11.6	11.6378	0.0227	11.5930	11.6825	-0.0479	0.200	-0.240	0.000
145	564	12.1	11.7847	0.0226	11.7402	11.8291	0.3434	0.200	1.718	0.006
146	570	11.8	11.7490	0.0180	11.7137	11.7843	0.0711	0.200	0.355	0.000
147	571	11.9	12.0034	0.0191	11.9659	12.0410	-0.1356	0.200	-0.677	0.001
148	572	11.7	11.7234	0.0198	11.6845	11.7622	-0.0281	0.200	-0.141	0.000
149	575	11.8	11.8028	0.0149	11.7735	11.8321	0.0394	0.201	0.197	0.000
150	576	11.7	11.8375	0.0138	11.8104	11.8645	-0.1548	0.201	-0.771	0.000
151	581	12.1	11.9065	0.0140	11.8791	11.9340	0.2047	0.201	1.020	0.001
152	583	11.7	11.5988	0.0258	11.5480	11.6495	0.0839	0.199	0.421	0.000
153	585	11.8	11.9528	0.0367	11.8806	12.0250	-0.1547	0.198	-0.782	0.004
154	587	11.8	11.4102	0.0365	11.3385	11.4819	0.3651	0.198	1.845	0.019
155	590	11.3	11.4818	0.0322	11.4185	11.5452	-0.1983	0.199	-0.999	0.004
156	606	12.2	12.0871	0.0257	12.0365	12.1377	0.1437	0.200	0.720	0.001
157	608	12.3	11.8571	0.0288	11.8004	11.9137	0.4668	0.199	2.345	0.019
158	616	11.8	11.7850	0.0158	11.7539	11.8160	0.0464	0.201	0.231	0.000
159	618	11.6	11.7130	0.0205	11.6726	11.7534	-0.1465	0.200	-0.732	0.001
160	621	11.1	11.6092	0.0249	11.5602	11.6581	-0.4967	0.200	-2.488	0.016

## Log-Linear MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

<b>Output Statistics</b>										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
161	626	12.0	11.8051	0.0148	11.7759	11.8342	0.1779	0.201	0.887	0.001
162	627	11.8	11.9042	0.0139	11.8769	11.9316	-0.0556	0.201	-0.277	0.000
163	628	11.9	11.9360	0.0150	11.9064	11.9656	0.002183	0.201	0.011	0.000
164	629	11.8	12.1175	0.0284	12.0617	12.1733	-0.3045	0.199	-1.529	0.008
165	630	12.0	11.8809	0.0135	11.8544	11.9074	0.1538	0.201	0.766	0.000
166	634	11.8	11.7856	0.0158	11.7546	11.8166	0.0595	0.201	0.297	0.000
167	637	11.0	11.3822	0.0383	11.3068	11.4575	-0.3801	0.197	-1.925	0.023
168	639	11.4	11.5944	0.0262	11.5429	11.6459	-0.2440	0.199	-1.224	0.004
169	643	12.8	12.3198	0.0472	12.2269	12.4127	0.4315	0.196	2.207	0.047
170	646	11.9	11.7613	0.0172	11.7276	11.7950	0.1110	0.200	0.554	0.000
171	647	11.5	11.7830	0.0159	11.7518	11.8143	-0.2872	0.201	-1.432	0.002
172	648	12.0	11.6590	0.0215	11.6167	11.7013	0.2922	0.200	1.461	0.004
173	649	12.0	12.0394	0.0218	11.9965	12.0823	-0.0882	0.200	-0.441	0.000
174	652	11.6	11.7491	0.0208	11.7083	11.7900	-0.1593	0.200	-0.796	0.001
175	657	11.9	11.7846	0.0158	11.7536	11.8157	0.1033	0.201	0.515	0.000
176	659	11.5	11.9159	0.0142	11.8879	11.9439	-0.4283	0.201	-2.135	0.004
177	660	12.0	11.7439	0.0206	11.7034	11.7845	0.2818	0.200	1.408	0.004
178	663	11.6	11.8945	0.0137	11.8676	11.9214	-0.2863	0.201	-1.427	0.002
179	664	11.8	11.6778	0.0207	11.6371	11.7186	0.1535	0.200	0.767	0.001
180	667	11.8	12.2148	0.0373	12.1415	12.2880	-0.4472	0.198	-2.262	0.030
181	672	11.5	11.7186	0.0201	11.6790	11.7582	-0.1703	0.200	-0.851	0.001
182	675	11.8	11.8115	0.0146	11.7829	11.8402	0.0379	0.201	0.189	0.000
183	695	11.9	11.9277	0.0351	11.8587	11.9968	-0.0677	0.198	-0.342	0.001
184	697	11.4	11.2463	0.0483	11.1513	11.3413	0.1501	0.195	0.768	0.006
185	698	11.7	11.6707	0.0210	11.6295	11.7119	0.0533	0.200	0.266	0.000
186	711	10.9	11.3298	0.0420	11.2472	11.4124	-0.4708	0.197	-2.393	0.044
187	714	11.8	11.5003	0.0313	11.4388	11.5618	0.2673	0.199	1.345	0.007
188	723	11.7	11.7234	0.0198	11.6845	11.7622	0.008677	0.200	0.043	0.000
189	724	11.8	11.7405	0.0205	11.7001	11.7808	0.0726	0.200	0.363	0.000
190	725	12.7	11.7899	0.0229	11.7448	11.8350	0.8862	0.200	4.434	0.043
191	726	11.7	11.7234	0.0198	11.6845	11.7622	-0.0240	0.200	-0.120	0.000
192	729	11.6	12.0190	0.0202	11.9792	12.0587	-0.4108	0.200	-2.052	0.007

**Log-Linear MLR with Dummy and Interactions**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
193	737	11.4	11.7804	0.0160	11.7489	11.8120	-0.3347	0.201	-1.669	0.003
194	739	12.1	11.6820	0.0206	11.6415	11.7224	0.4132	0.200	2.065	0.008
195	750	11.5	11.7533	0.0209	11.7121	11.7944	-0.2605	0.200	-1.302	0.003
196	755	12.0	11.7759	0.0163	11.7439	11.8079	0.1817	0.200	0.906	0.001
197	761	11.8	11.7234	0.0198	11.6845	11.7622	0.0325	0.200	0.162	0.000
198	762	11.5	11.7520	0.0273	11.6984	11.8056	-0.2391	0.199	-1.200	0.004
199	772	11.5	11.6863	0.0205	11.6461	11.7265	-0.1536	0.200	-0.767	0.001
200	773	11.6	11.6640	0.0213	11.6222	11.7058	-0.0834	0.200	-0.417	0.000
201	774	11.6	11.7389	0.0186	11.7023	11.7756	-0.0906	0.200	-0.452	0.000
202	798	11.6	11.6939	0.0220	11.6506	11.7372	-0.0857	0.200	-0.428	0.000
203	805	11.7	11.8090	0.0147	11.7801	11.8378	-0.1305	0.201	-0.651	0.000
204	807	11.8	11.7610	0.0172	11.7272	11.7948	0.0557	0.200	0.278	0.000
205	808	12.3	11.9550	0.0369	11.8826	12.0275	0.3621	0.198	1.831	0.019
206	809	12.0	11.7953	0.0153	11.7653	11.8254	0.1873	0.201	0.934	0.001
207	814	12.0	11.9107	0.0141	11.8830	11.9384	0.0590	0.201	0.294	0.000
208	815	11.7	11.6928	0.0203	11.6529	11.7327	-0.0315	0.200	-0.157	0.000
209	817	11.8	11.7701	0.0166	11.7374	11.8027	0.0577	0.200	0.288	0.000
210	827	11.6	11.3704	0.0391	11.2934	11.4473	0.2333	0.197	1.182	0.009
211	831	12.0	11.8945	0.0137	11.8676	11.9214	0.1252	0.201	0.624	0.000
212	834	12.0	11.9347	0.0150	11.9052	11.9642	0.0910	0.201	0.454	0.000
213	835	11.8	11.8141	0.0145	11.7857	11.8426	0.0349	0.201	0.174	0.000
214	840	11.8	11.6820	0.0206	11.6415	11.7224	0.0972	0.200	0.486	0.000
215	843	12.1	11.8209	0.0142	11.7930	11.8489	0.2510	0.201	1.251	0.001
216	844	11.9	12.0268	0.0208	11.9858	12.0677	-0.1702	0.200	-0.851	0.001
217	854	12.0	11.9117	0.0141	11.8840	11.9394	0.0586	0.201	0.292	0.000
218	864	11.8	11.8154	0.0144	11.7871	11.8438	-0.0211	0.201	-0.105	0.000
219	866	11.9	11.7681	0.0167	11.7352	11.8010	0.1402	0.200	0.700	0.001
220	871	11.6	11.7331	0.0191	11.6956	11.7706	-0.1294	0.200	-0.646	0.001
221	873	11.7	11.7383	0.0187	11.7016	11.7750	-0.0769	0.200	-0.384	0.000
222	874	11.8	11.8543	0.0135	11.8278	11.8808	-0.0562	0.201	-0.280	0.000
223	881	12.0	11.6581	0.0215	11.6158	11.7005	0.3059	0.200	1.529	0.005
224	885	11.5	11.7325	0.0191	11.6949	11.7700	-0.2195	0.200	-1.096	0.002

## Log-Linear MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
225	887	11.9	11.9982	0.0187	11.9614	12.0350	-0.1138	0.200	-0.568	0.000
226	888	11.8	11.7238	0.0202	11.6841	11.7635	0.0929	0.200	0.464	0.000
227	889	12.5	12.1619	0.0324	12.0983	12.2256	0.3368	0.199	1.697	0.013
228	890	11.9	11.9311	0.0148	11.9020	11.9603	-0.0161	0.201	-0.080	0.000
229	891	11.7	11.7428	0.0184	11.7067	11.7790	-0.0237	0.200	-0.118	0.000
230	896	11.8	12.0255	0.0207	11.9847	12.0662	-0.1761	0.200	-0.880	0.001
231	901	11.6	11.7214	0.0199	11.6823	11.7606	-0.1132	0.200	-0.566	0.001
232	902	11.9	11.8666	0.0134	11.8403	11.8930	0.0715	0.201	0.356	0.000
233	906	11.8	11.7879	0.0156	11.7571	11.8186	-0.0281	0.201	-0.140	0.000
234	911	11.9	12.1804	0.0341	12.1134	12.2474	-0.2337	0.198	-1.179	0.007
235	913	11.4	11.5409	0.0294	11.4830	11.5987	-0.1558	0.199	-0.783	0.002
236	918	11.8	11.6883	0.0204	11.6481	11.7284	0.1248	0.200	0.624	0.001
237	920	12.1	11.9017	0.0138	11.8745	11.9288	0.1794	0.201	0.894	0.001
238	922	11.9	11.8987	0.0333	11.8332	11.9641	-0.007979	0.198	-0.040	0.000
239	932	11.7	11.7432	0.0183	11.7071	11.7792	-0.0690	0.200	-0.344	0.000
240	935	12.4	12.1140	0.0281	12.0588	12.1691	0.2827	0.199	1.419	0.007
241	936	11.3	11.3430	0.0411	11.2623	11.4238	-0.0545	0.197	-0.277	0.001
242	943	11.9	11.7340	0.0204	11.6940	11.7740	0.1844	0.200	0.922	0.001
243	947	11.9	11.8141	0.0145	11.7857	11.8426	0.0565	0.201	0.281	0.000
244	951	11.8	11.7234	0.0198	11.6845	11.7622	0.0442	0.200	0.221	0.000
245	955	11.8	11.6343	0.0230	11.5891	11.6795	0.1216	0.200	0.608	0.001
246	961	11.7	11.4250	0.0355	11.3551	11.4949	0.2407	0.198	1.215	0.008
247	968	11.8	11.7992	0.0151	11.7696	11.8289	0.0138	0.201	0.069	0.000
248	970	11.8	11.7983	0.0151	11.7685	11.8280	0.0511	0.201	0.255	0.000
249	971	11.8	11.8297	0.0140	11.8023	11.8571	-0.0167	0.201	-0.083	0.000
250	975	12.0	12.2821	0.0621	12.1599	12.4042	-0.2533	0.191	-1.324	0.031
251	977	11.4	11.4331	0.0350	11.3642	11.5020	-0.0768	0.198	-0.388	0.001
252	979	11.6	11.6157	0.0244	11.5677	11.6636	-0.007425	0.200	-0.037	0.000
253	981	12.1	11.7671	0.0168	11.7341	11.8002	0.3246	0.200	1.620	0.003
254	986	11.7	11.6742	0.0208	11.6332	11.7151	0.0619	0.200	0.309	0.000
255	993	12.1	12.0433	0.0221	11.9998	12.0868	0.0956	0.200	0.478	0.000
256	996	11.7	11.6996	0.0265	11.6475	11.7517	0.008884	0.199	0.045	0.000

## Log-Linear MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
257	997	11.8	11.7837	0.0159	11.7525	11.8148	0.0404	0.201	0.202	0.000
258	1001	11.3	11.6265	0.0235	11.5802	11.6728	-0.3120	0.200	-1.562	0.006
259	1007	12.0	11.9804	0.0175	11.9460	12.0149	0.0242	0.200	0.121	0.000
260	1012	11.5	11.7825	0.0225	11.7383	11.8267	-0.2696	0.200	-1.349	0.004
261	1015	11.7	11.7940	0.0153	11.7639	11.8242	-0.1055	0.201	-0.526	0.000
262	1021	12.1	11.6672	0.0211	11.6257	11.7088	0.4110	0.200	2.055	0.008
263	1027	12.0	11.8530	0.0135	11.8265	11.8796	0.1757	0.201	0.875	0.001
264	1029	11.6	11.8893	0.0136	11.8626	11.9160	-0.3276	0.201	-1.632	0.002
265	1036	11.3	11.6050	0.0253	11.5554	11.6547	-0.2665	0.200	-1.335	0.005
266	1046	11.8	11.7975	0.0235	11.7513	11.8436	0.0491	0.200	0.246	0.000
267	1050	11.3	11.6235	0.0238	11.5767	11.6702	-0.2742	0.200	-1.373	0.004
268	1053	12.0	12.0841	0.0255	12.0340	12.1342	-0.0704	0.200	-0.353	0.000
269	1054	11.9	11.7526	0.0209	11.7115	11.7937	0.1284	0.200	0.642	0.001
270	1065	11.9	11.8174	0.0143	11.7892	11.8456	0.1273	0.201	0.635	0.000
271	1068	12.0	11.9655	0.0166	11.9329	11.9981	0.0656	0.200	0.327	0.000
272	1070	11.8	11.7328	0.0191	11.6953	11.7703	0.0802	0.200	0.401	0.000
273	1071	11.8	11.7830	0.0159	11.7518	11.8143	0.0300	0.201	0.150	0.000
274	1073	11.4	11.7374	0.0204	11.6973	11.7776	-0.3133	0.200	-1.566	0.004
275	1074	12.0	11.7309	0.0203	11.6910	11.7708	0.2489	0.200	1.243	0.003
276	1078	11.8	11.7986	0.0151	11.7689	11.8283	0.0422	0.201	0.210	0.000
277	1084	12.0	11.8488	0.0135	11.8222	11.8755	0.1341	0.201	0.668	0.000
278	1089	11.8	11.7923	0.0231	11.7468	11.8377	0.0391	0.200	0.196	0.000
279	1091	11.4	11.7804	0.0160	11.7489	11.8120	-0.3412	0.201	-1.701	0.003
280	1094	11.9	11.8323	0.0139	11.8050	11.8596	0.0591	0.201	0.294	0.000
281	1095	11.8	11.7467	0.0181	11.7111	11.7823	0.0208	0.200	0.104	0.000
282	1099	11.8	11.7690	0.0277	11.7145	11.8235	-0.009215	0.199	-0.046	0.000
283	1102	11.7	11.7513	0.0178	11.7163	11.7863	-0.0602	0.200	-0.300	0.000
284	1103	11.8	11.8109	0.0146	11.7822	11.8396	0.002132	0.201	0.011	0.000
285	1104	12.0	11.8303	0.0139	11.8029	11.8577	0.1495	0.201	0.745	0.000
286	1113	11.8	11.7078	0.0209	11.6667	11.7490	0.0667	0.200	0.333	0.000
287	1114	11.8	11.7701	0.0166	11.7374	11.8027	0.0393	0.200	0.196	0.000
288	1120	11.8	11.7804	0.0160	11.7489	11.8120	0.0229	0.201	0.114	0.000

## Log-Linear MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
289	1123	11.6	11.6300	0.0233	11.5842	11.6757	-0.003708	0.200	-0.019	0.000
290	1124	11.7	11.5732	0.0282	11.5177	11.6287	0.1053	0.199	0.528	0.001
291	1126	11.7	11.7691	0.0167	11.7363	11.8019	-0.1164	0.200	-0.581	0.000
292	1136	11.5	11.5195	0.0304	11.4598	11.5792	0.0132	0.199	0.067	0.000
293	1137	11.7	11.8491	0.0135	11.8225	11.8758	-0.1623	0.201	-0.809	0.000
294	1140	11.9	11.6531	0.0265	11.6009	11.7053	0.2245	0.199	1.126	0.004
295	1141	11.8	11.7519	0.0178	11.7170	11.7868	0.0903	0.200	0.451	0.000
296	1145	11.3	11.6222	0.0239	11.5752	11.6691	-0.3324	0.200	-1.664	0.007
297	1146	11.9	11.9550	0.0369	11.8826	12.0275	-0.0433	0.198	-0.219	0.000
298	1151	11.7	11.7454	0.0182	11.7096	11.7812	-0.0174	0.200	-0.087	0.000
299	1152	11.9	11.7396	0.0205	11.6993	11.7799	0.1781	0.200	0.890	0.001
300	1155	12.2	12.0332	0.0213	11.9913	12.0752	0.1818	0.200	0.909	0.002
301	1157	12.1	11.8534	0.0135	11.8268	11.8799	0.2468	0.201	1.230	0.001
302	1169	12.4	11.8787	0.0311	11.8176	11.9398	0.4886	0.199	2.459	0.025
303	1172	12.0	11.8521	0.0135	11.8255	11.8786	0.1494	0.201	0.745	0.000
304	1180	11.4	11.6655	0.0212	11.6238	11.7072	-0.2251	0.200	-1.126	0.002
305	1186	11.6	11.6865	0.0204	11.6463	11.7267	-0.1258	0.200	-0.628	0.001
306	1201	11.7	11.7234	0.0198	11.6845	11.7622	-0.0616	0.200	-0.308	0.000
307	1203	11.7	11.7867	0.0282	11.7312	11.8422	-0.1168	0.199	-0.586	0.001
308	1209	11.8	11.8592	0.0134	11.8328	11.8856	-0.009795	0.201	-0.049	0.000
309	1213	11.6	11.5676	0.0288	11.5109	11.6242	0.0676	0.199	0.339	0.000
310	1215	11.8	11.7671	0.0168	11.7341	11.8002	0.0422	0.200	0.210	0.000
311	1219	11.3	11.4649	0.0332	11.3996	11.5301	-0.1688	0.198	-0.851	0.003
312	1221	11.7	11.7389	0.0186	11.7023	11.7756	-0.0863	0.200	-0.431	0.000
313	1223	11.9	12.0417	0.0220	11.9985	12.0849	-0.1711	0.200	-0.856	0.001
314	1224	11.8	12.1357	0.0300	12.0767	12.1947	-0.3014	0.199	-1.515	0.009
315	1226	11.9	11.8122	0.0145	11.7836	11.8408	0.0723	0.201	0.360	0.000
316	1228	11.9	11.7389	0.0186	11.7023	11.7756	0.1592	0.200	0.795	0.001
317	1230	11.8	11.9318	0.0149	11.9026	11.9610	-0.1799	0.201	-0.897	0.001
318	1232	11.8	11.8290	0.0140	11.8016	11.8565	-0.0347	0.201	-0.173	0.000
319	1233	11.5	11.8401	0.0137	11.8131	11.8670	-0.3093	0.201	-1.541	0.002
320	1234	11.9	11.8284	0.0140	11.8009	11.8559	0.0352	0.201	0.175	0.000

## Log-Linear MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
321	1250	11.7	11.7636	0.0170	11.7301	11.7970	-0.0767	0.200	-0.383	0.000
322	1251	12.4	12.1272	0.0292	12.0697	12.1848	0.2777	0.199	1.395	0.007
323	1255	12.0	11.7808	0.0224	11.7368	11.8247	0.2353	0.200	1.177	0.003
324	1256	11.8	11.8007	0.0287	11.7443	11.8572	-0.0449	0.199	-0.225	0.000
325	1258	11.5	11.6092	0.0249	11.5602	11.6581	-0.0972	0.200	-0.487	0.001
326	1260	11.9	11.7850	0.0158	11.7539	11.8160	0.1401	0.201	0.698	0.001
327	1262	11.8	11.7837	0.0159	11.7525	11.8148	-0.0169	0.201	-0.084	0.000
328	1264	12.1	12.1381	0.0503	12.0392	12.2370	-0.0346	0.195	-0.178	0.000
329	1265	12.1	11.8767	0.0134	11.8503	11.9031	0.2296	0.201	1.144	0.001
330	1270	11.9	11.9373	0.0151	11.9076	11.9670	-0.0597	0.201	-0.298	0.000
331	1274	12.1	11.7160	0.0201	11.6764	11.7556	0.3679	0.200	1.838	0.006
332	1276	11.8	12.0657	0.0239	12.0186	12.1127	-0.2379	0.200	-1.191	0.003
333	1286	11.8	11.8340	0.0301	11.7748	11.8931	-0.0396	0.199	-0.199	0.000
334	1291	12.1	11.8167	0.0144	11.7885	11.8450	0.2868	0.201	1.429	0.002
335	1295	11.7	11.6092	0.0249	11.5602	11.6581	0.0435	0.200	0.218	0.000
336	1296	11.8	11.7843	0.0158	11.7532	11.8154	0.0543	0.201	0.271	0.000
337	1297	12.0	11.8090	0.0147	11.7801	11.8378	0.1422	0.201	0.709	0.000
338	1298	11.8	11.6542	0.0217	11.6115	11.6970	0.1952	0.200	0.976	0.002
339	1299	12.0	12.6445	0.1343	12.3805	12.9085	-0.6616	0.150	-4.416	2.611
340	1300	11.9	11.8472	0.0136	11.8205	11.8739	0.0975	0.201	0.486	0.000
341	1305	11.8	11.7920	0.0231	11.7466	11.8375	-0.0168	0.200	-0.084	0.000
342	1315	11.7	11.6274	0.0235	11.5812	11.6735	0.0595	0.200	0.298	0.000
343	1316	12.2	12.1279	0.0293	12.0703	12.1855	0.1121	0.199	0.563	0.001
344	1320	11.6	11.6274	0.0235	11.5812	11.6735	-0.0101	0.200	-0.050	0.000
345	1321	12.0	11.9224	0.0145	11.8939	11.9509	0.0384	0.201	0.191	0.000
346	1322	11.2	11.3231	0.0425	11.2396	11.4067	-0.1318	0.197	-0.670	0.003
347	1324	11.3	11.3143	0.0431	11.2294	11.3991	0.006298	0.196	0.032	0.000
348	1327	11.3	11.5897	0.0266	11.5373	11.6420	-0.3125	0.199	-1.567	0.007
349	1333	11.5	11.5988	0.0258	11.5480	11.6495	-0.0858	0.199	-0.430	0.001
350	1341	11.7	11.7260	0.0196	11.6875	11.7644	-0.006038	0.200	-0.030	0.000
351	1351	12.2	12.2971	0.0451	12.2085	12.3857	-0.0910	0.196	-0.464	0.002
352	1352	12.0	11.9995	0.0188	11.9626	12.0365	0.0499	0.200	0.249	0.000

## Log-Linear MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

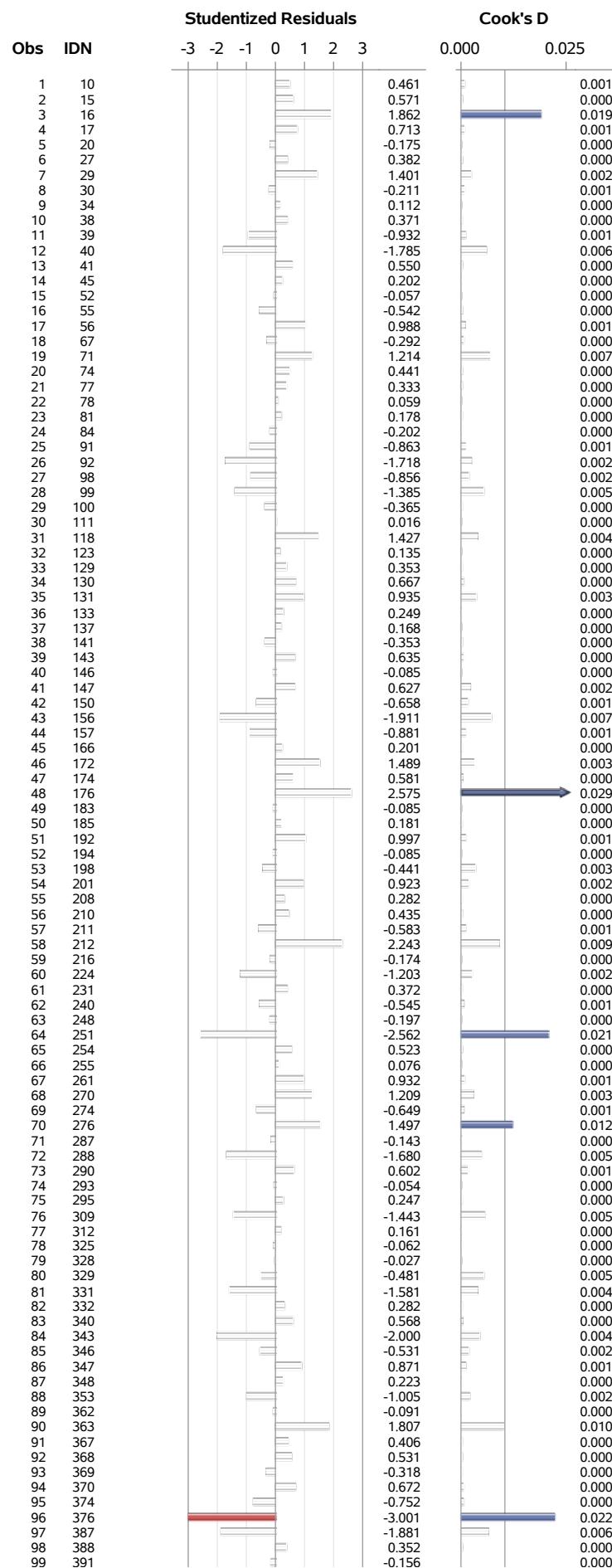
Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
353	1353	11.8	11.6597	0.0265	11.6077	11.7118	0.1525	0.199	0.765	0.002
354	1357	11.6	11.7325	0.0191	11.6949	11.7700	-0.1242	0.200	-0.620	0.001
355	1358	11.9	11.7927	0.0154	11.7625	11.8230	0.1250	0.201	0.623	0.000
356	1363	11.6	12.0067	0.0193	11.9687	12.0446	-0.4459	0.200	-2.227	0.008
357	1372	12.0	11.9817	0.0176	11.9471	12.0163	0.0350	0.200	0.175	0.000
358	1378	11.7	11.7695	0.0217	11.7268	11.8122	-0.0996	0.200	-0.498	0.000
359	1381	11.0	11.6092	0.0249	11.5602	11.6581	-0.6324	0.200	-3.168	0.026
360	1382	12.4	12.1295	0.0295	12.0716	12.1874	0.2484	0.199	1.248	0.006
361	1385	11.6	11.6945	0.0203	11.6547	11.7344	-0.1328	0.200	-0.664	0.001
362	1390	11.8	11.6907	0.0264	11.6388	11.7427	0.0922	0.199	0.462	0.001
363	1392	11.7	11.9568	0.0161	11.9251	11.9884	-0.2287	0.201	-1.141	0.001
364	1393	11.7	11.7351	0.0189	11.6979	11.7722	-0.0151	0.200	-0.075	0.000
365	1398	11.8	11.9085	0.0340	11.8417	11.9753	-0.0771	0.198	-0.389	0.001
366	1399	11.8	12.0605	0.0235	12.0143	12.1067	-0.2255	0.200	-1.129	0.003
367	1401	11.7	11.6465	0.0266	11.5942	11.6987	0.0488	0.199	0.245	0.000
368	1412	11.8	11.9840	0.0177	11.9491	12.0189	-0.1346	0.200	-0.672	0.001
369	1413	11.4	11.7804	0.0160	11.7489	11.8120	-0.3729	0.201	-1.860	0.004
370	1415	12.2	12.1558	0.0517	12.0542	12.2575	0.0846	0.194	0.435	0.002
371	1419	11.7	11.8141	0.0145	11.7857	11.8426	-0.0861	0.201	-0.429	0.000
372	1424	12.5	11.8989	0.0333	11.8334	11.9644	0.6255	0.198	3.153	0.047
373	1425	11.9	11.8790	0.0135	11.8525	11.9054	-0.001395	0.201	-0.007	0.000
374	1426	11.9	11.8491	0.0135	11.8225	11.8758	0.0144	0.201	0.072	0.000
375	1428	11.8	11.9483	0.0156	11.9176	11.9791	-0.0989	0.201	-0.493	0.000
376	1436	12.1	11.9415	0.0153	11.9114	11.9716	0.1253	0.201	0.625	0.000
377	1437	11.7	11.7234	0.0198	11.6845	11.7622	-0.0240	0.200	-0.120	0.000
378	1444	11.7	11.4944	0.0316	11.4323	11.5565	0.2092	0.199	1.053	0.005
379	1449	11.6	11.7136	0.0201	11.6740	11.7532	-0.0873	0.200	-0.436	0.000
380	1451	11.8	12.0242	0.0206	11.9836	12.0647	-0.2038	0.200	-1.018	0.002
381	1453	11.9	11.6542	0.0217	11.6115	11.6970	0.2303	0.200	1.151	0.003
382	1459	11.9	11.7927	0.0154	11.7625	11.8230	0.0717	0.201	0.358	0.000
383	1460	11.9	11.6941	0.0203	11.6542	11.7340	0.2075	0.200	1.037	0.002

## Log-Linear MLR with Dummy and Interactions

The REG Procedure

Model: MODEL1

Dependent Variable: SalePrice\_I

**Studentized Residuals and Cook's D for SalePrice\_I**

## Log-Linear MLR with Dummy and Interactions

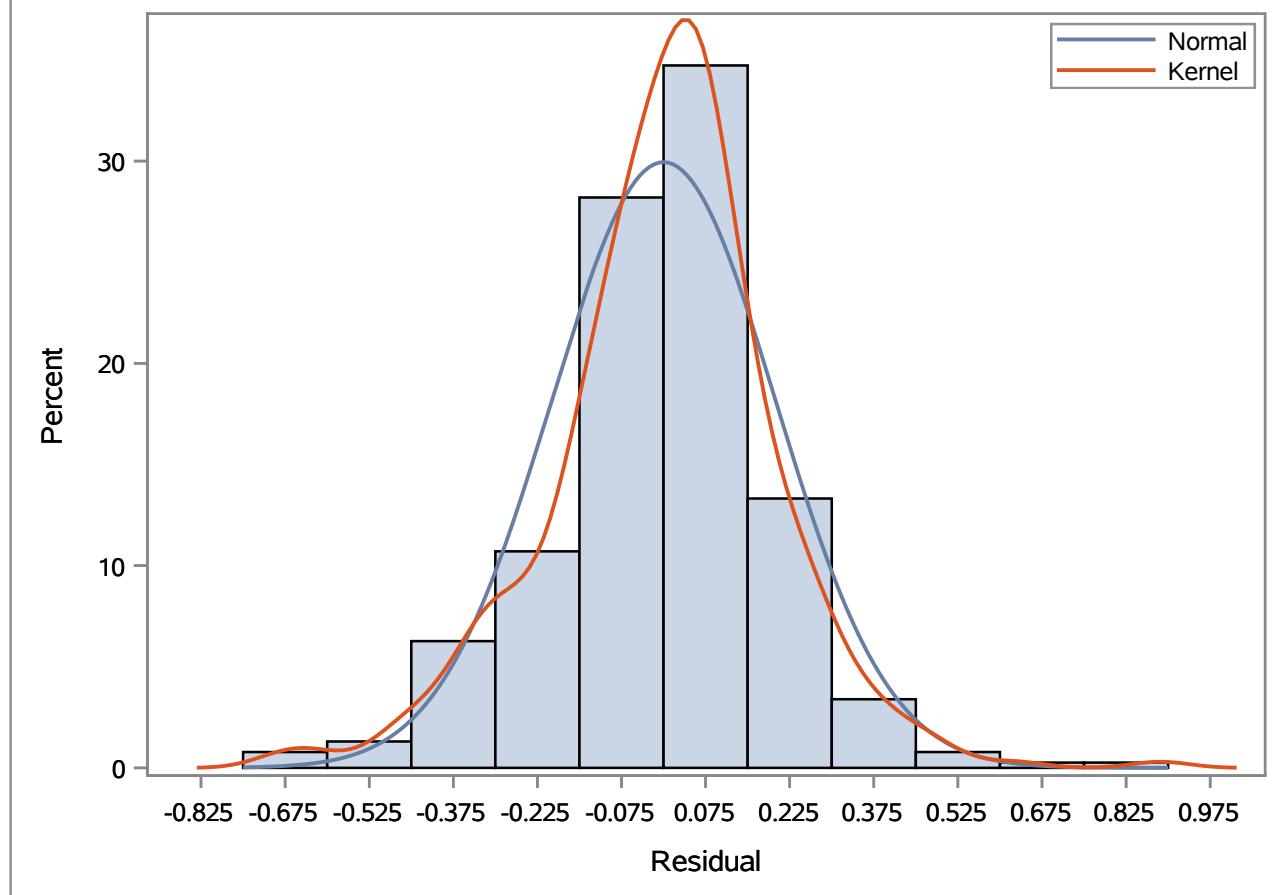
**The REG Procedure**

Model: MODEL1

Dependent Variable: SalePrice\_I

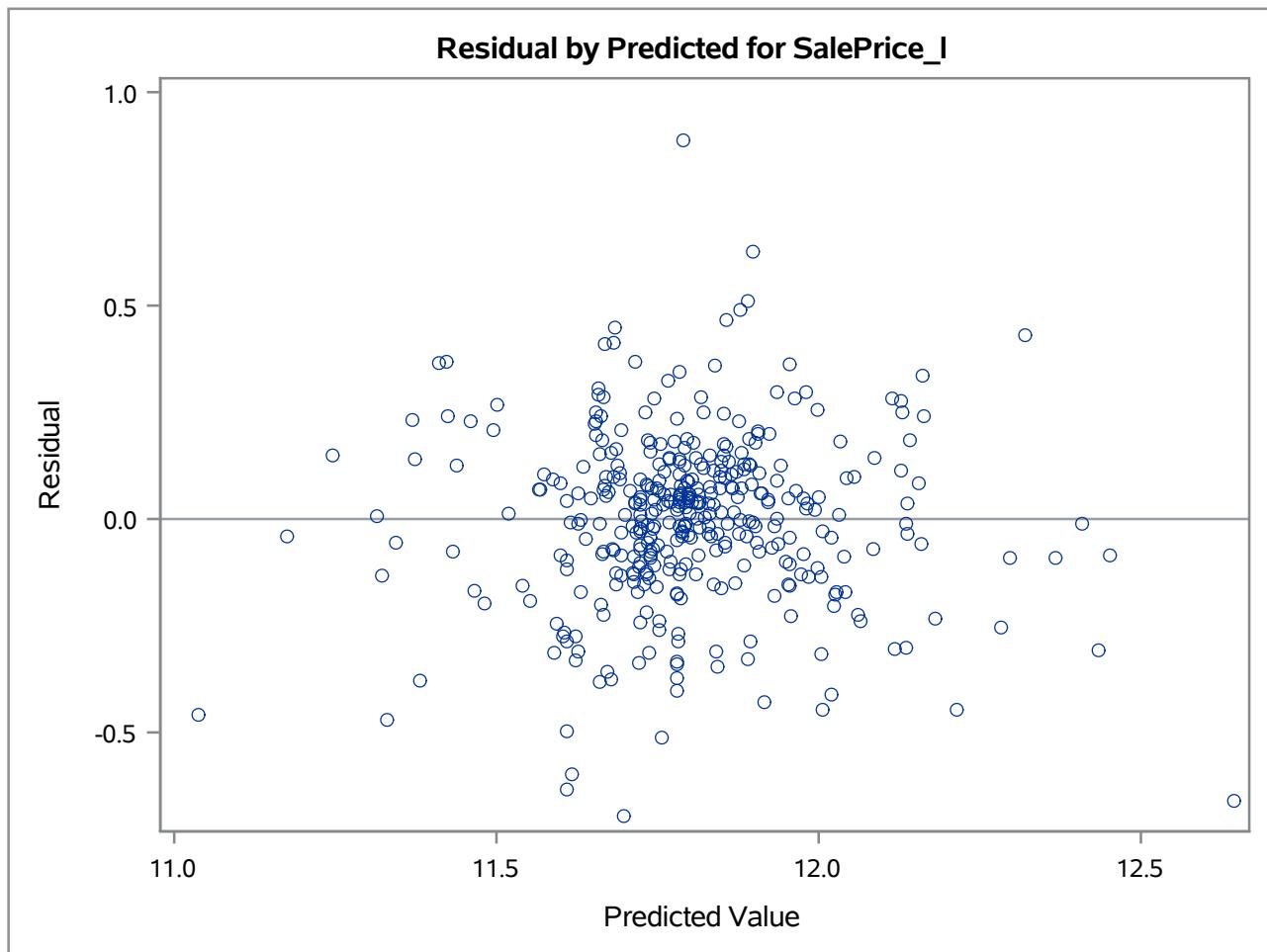
<b>Sum of Residuals</b>	-2.6642E-12
<b>Sum of Squared Residuals</b>	15.25484
<b>Predicted Residual SS (PRESS)</b>	16.86060

**Distribution of Residuals for SalePrice\_I**



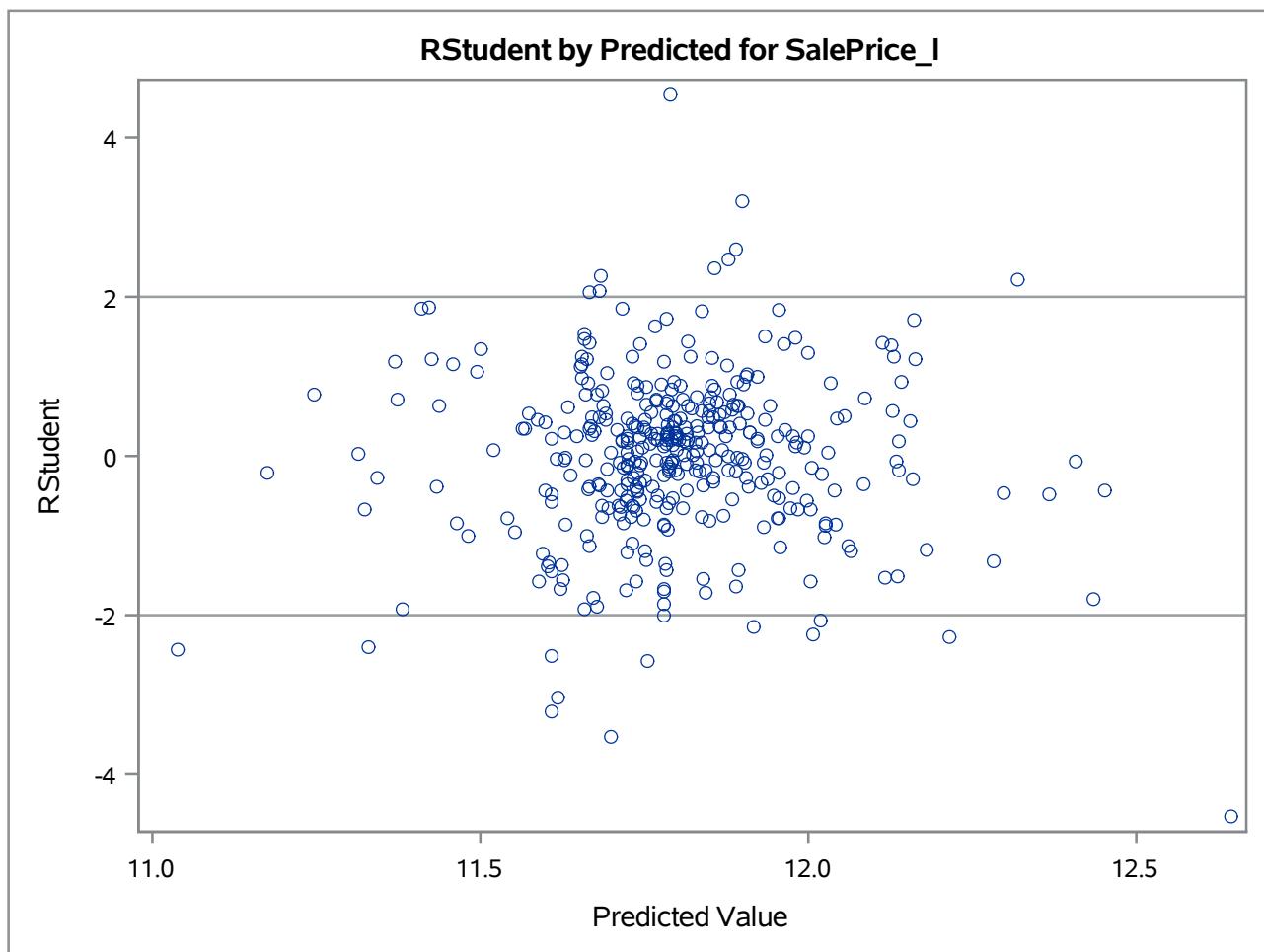
**Log-Linear MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



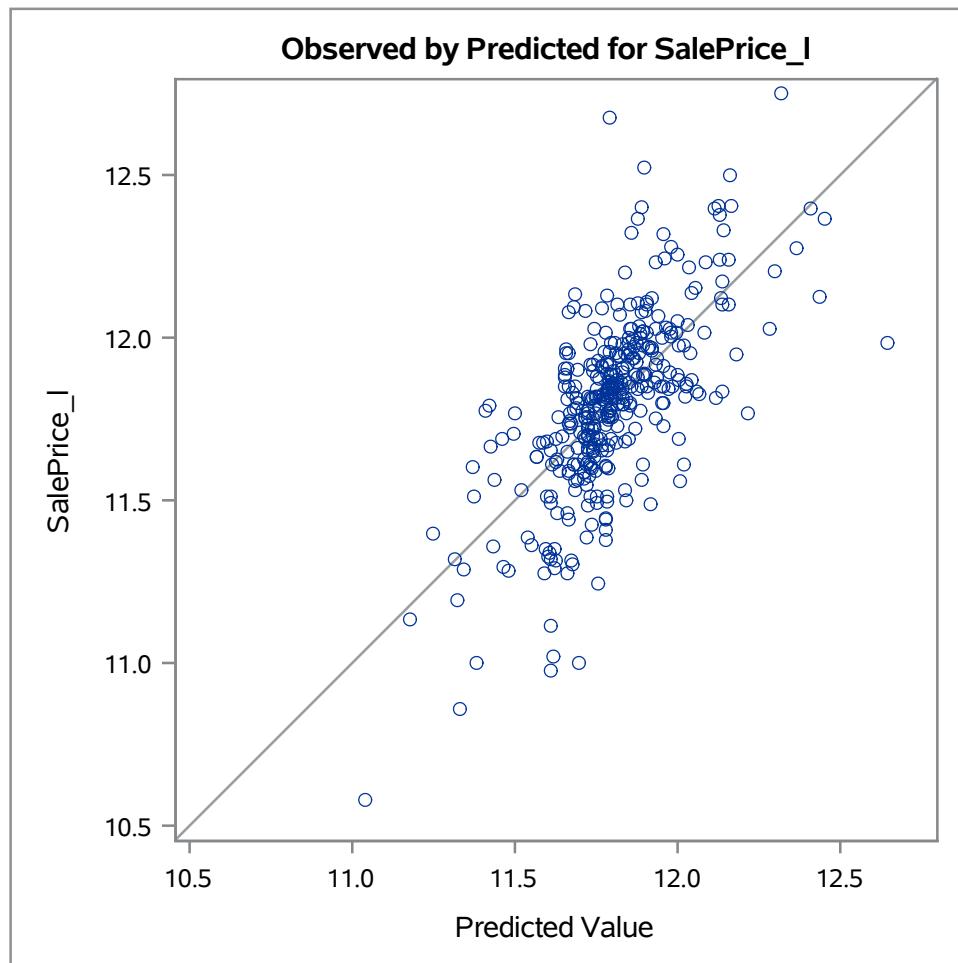
**Log-Linear MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



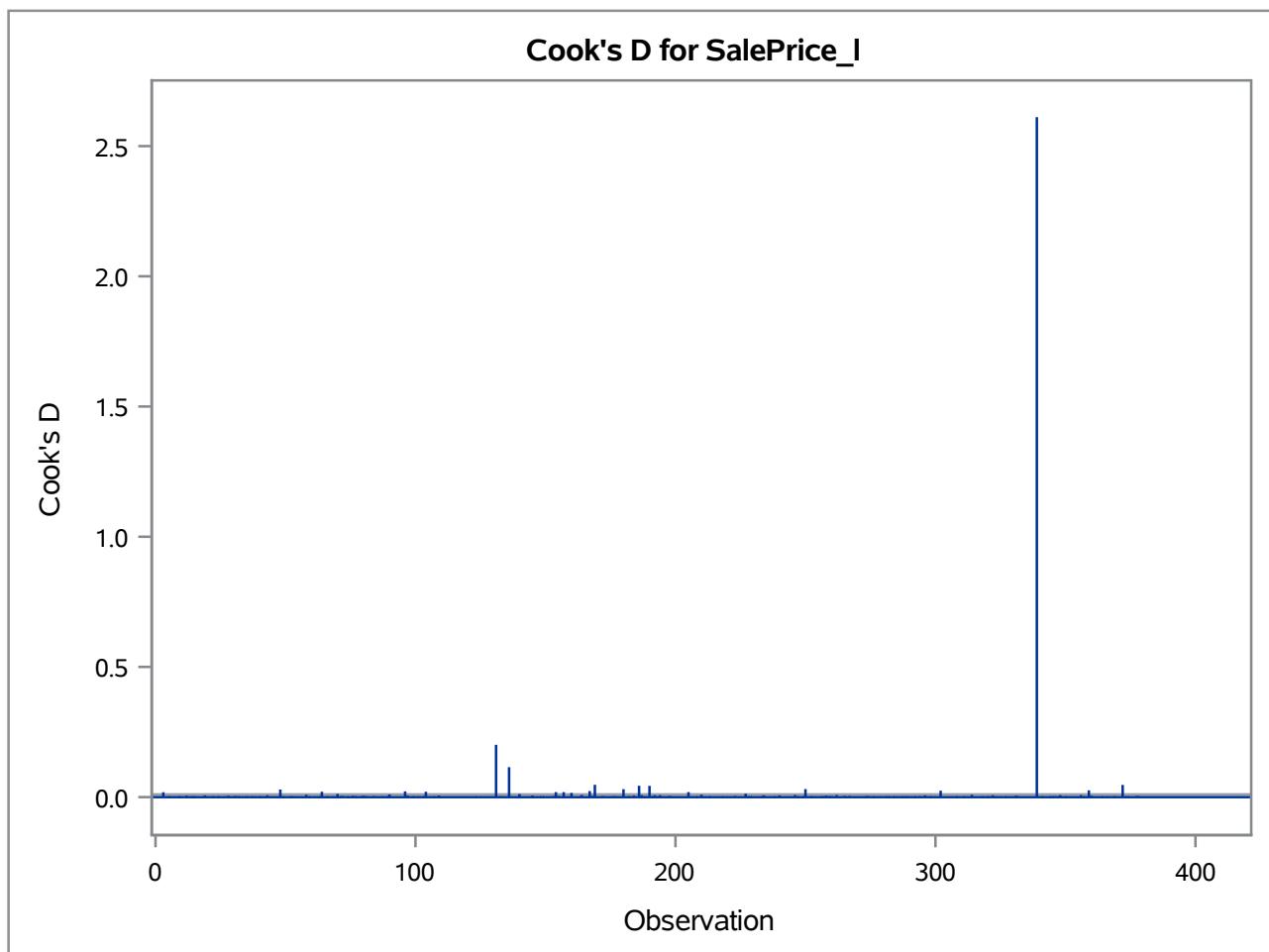
**Log-Linear MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



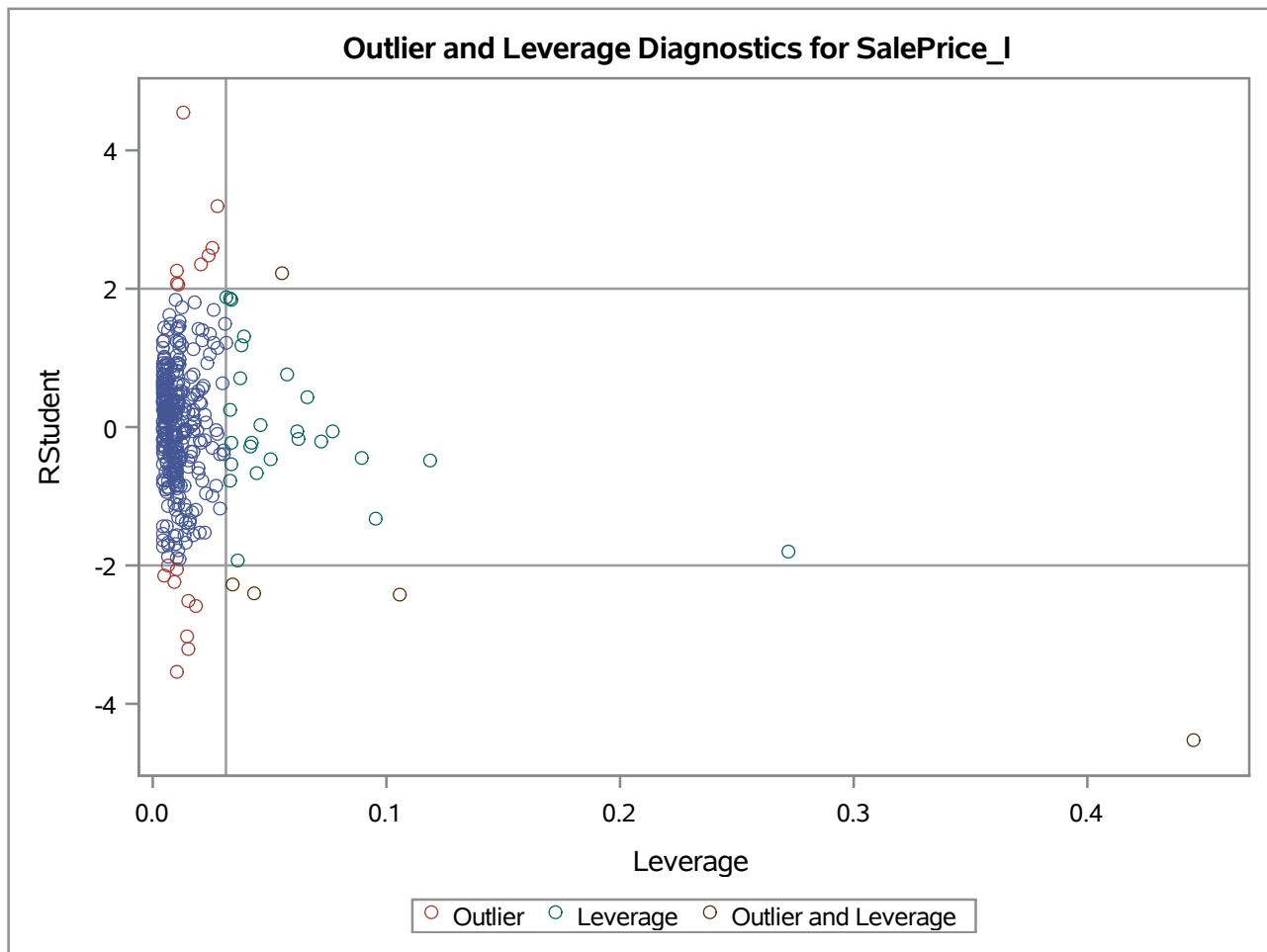
**Log-Linear MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



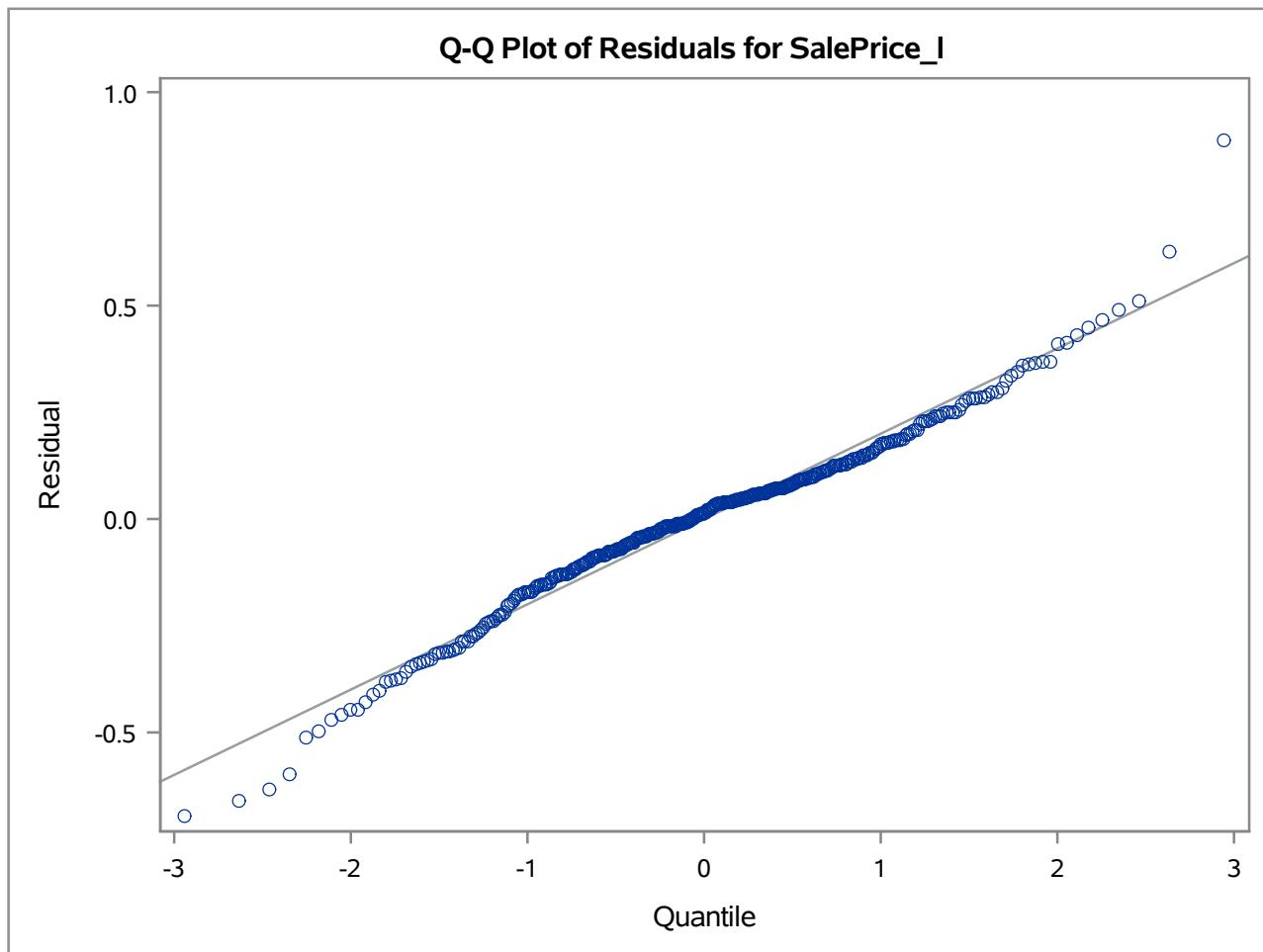
**Log-Linear MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



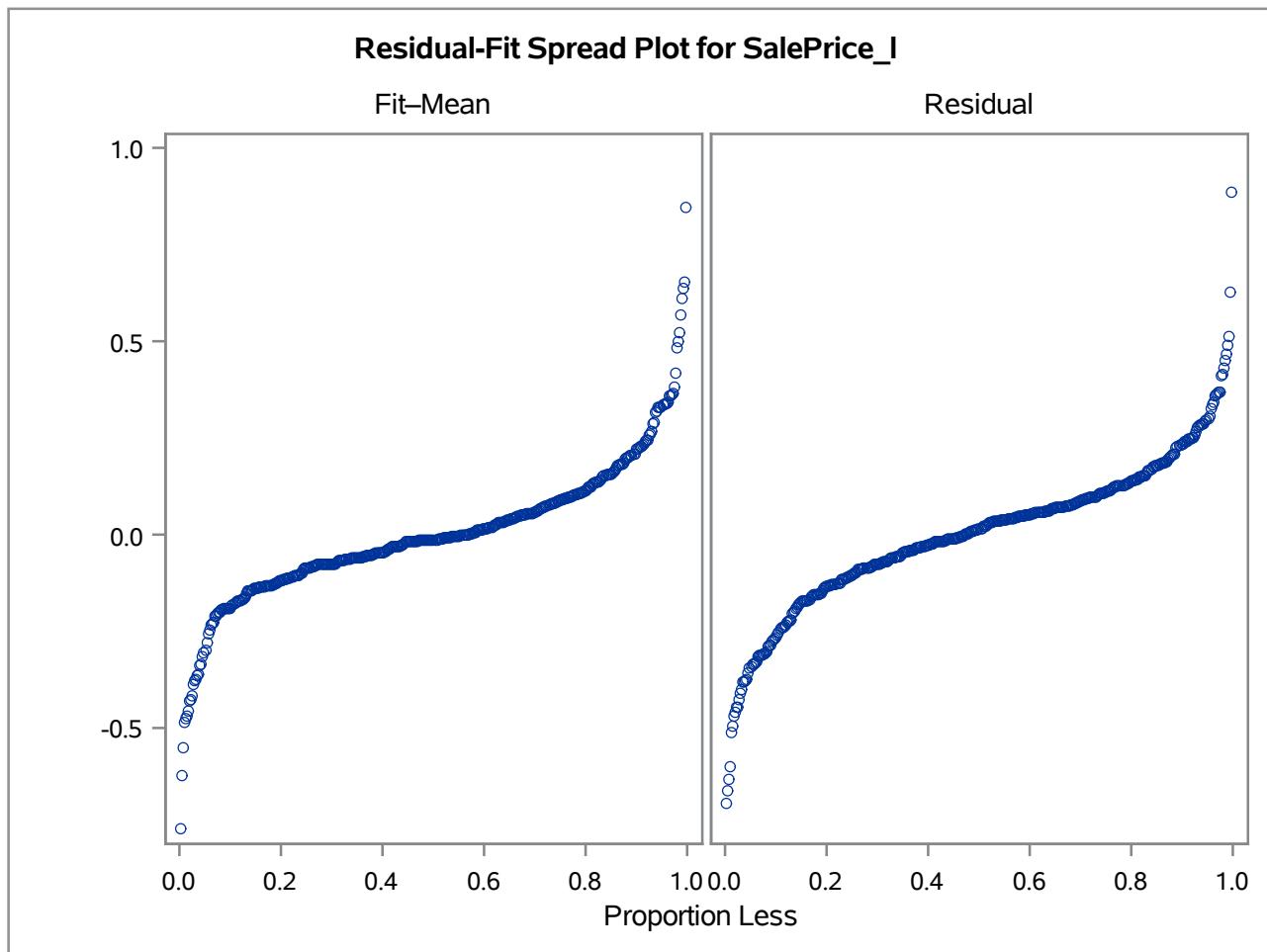
**Log-Linear MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



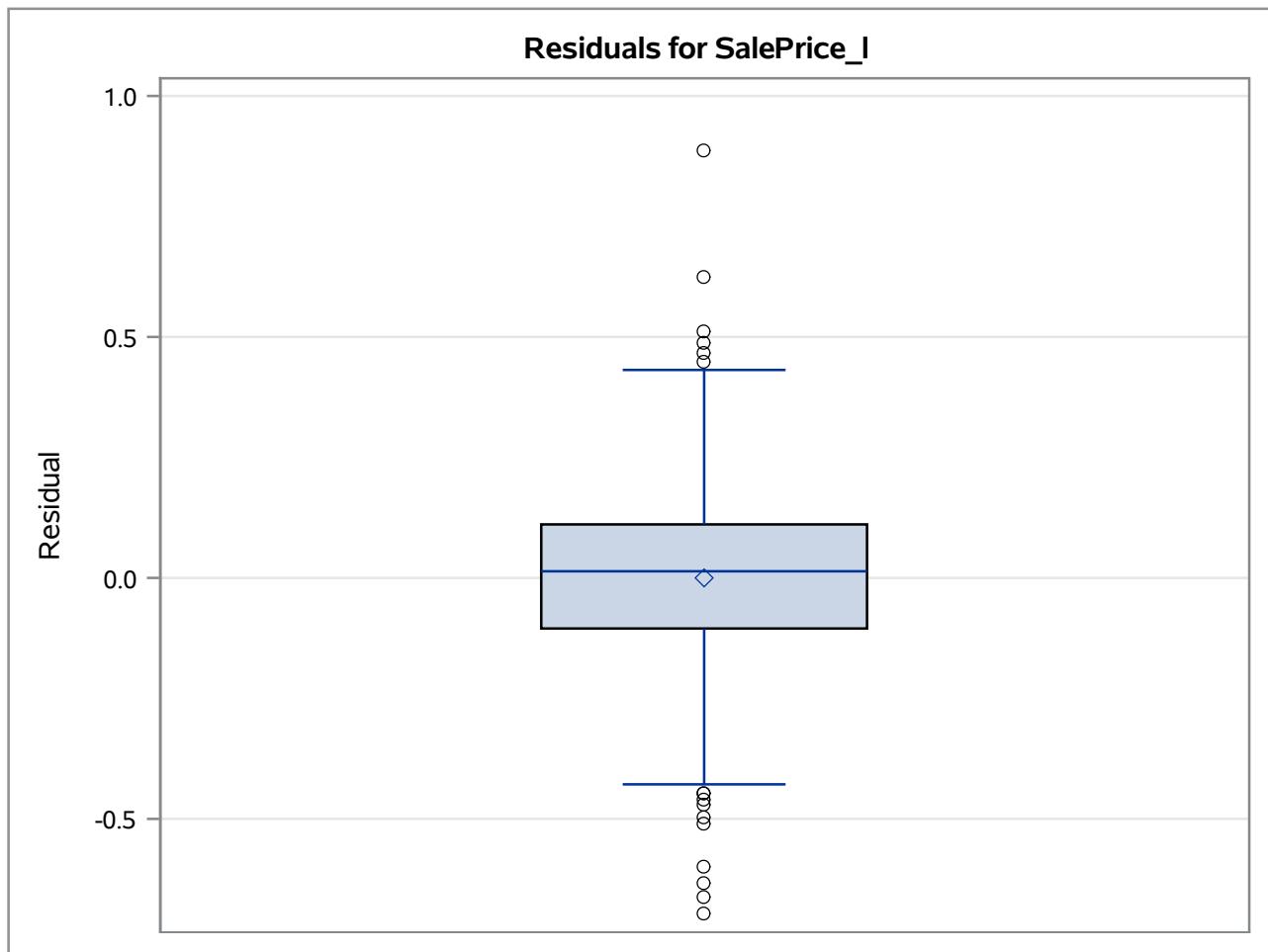
**Log-Linear MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



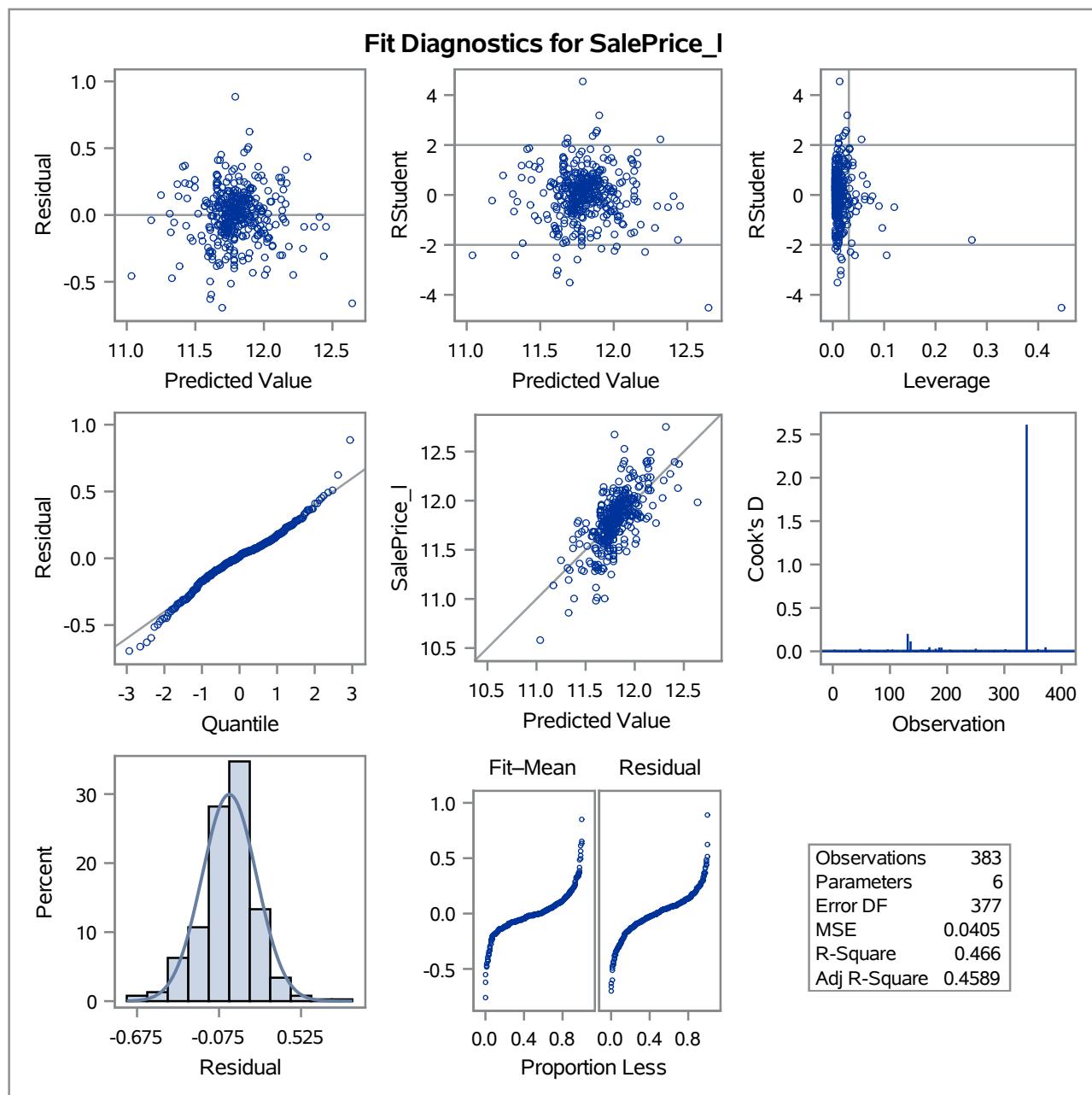
**Log-Linear MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



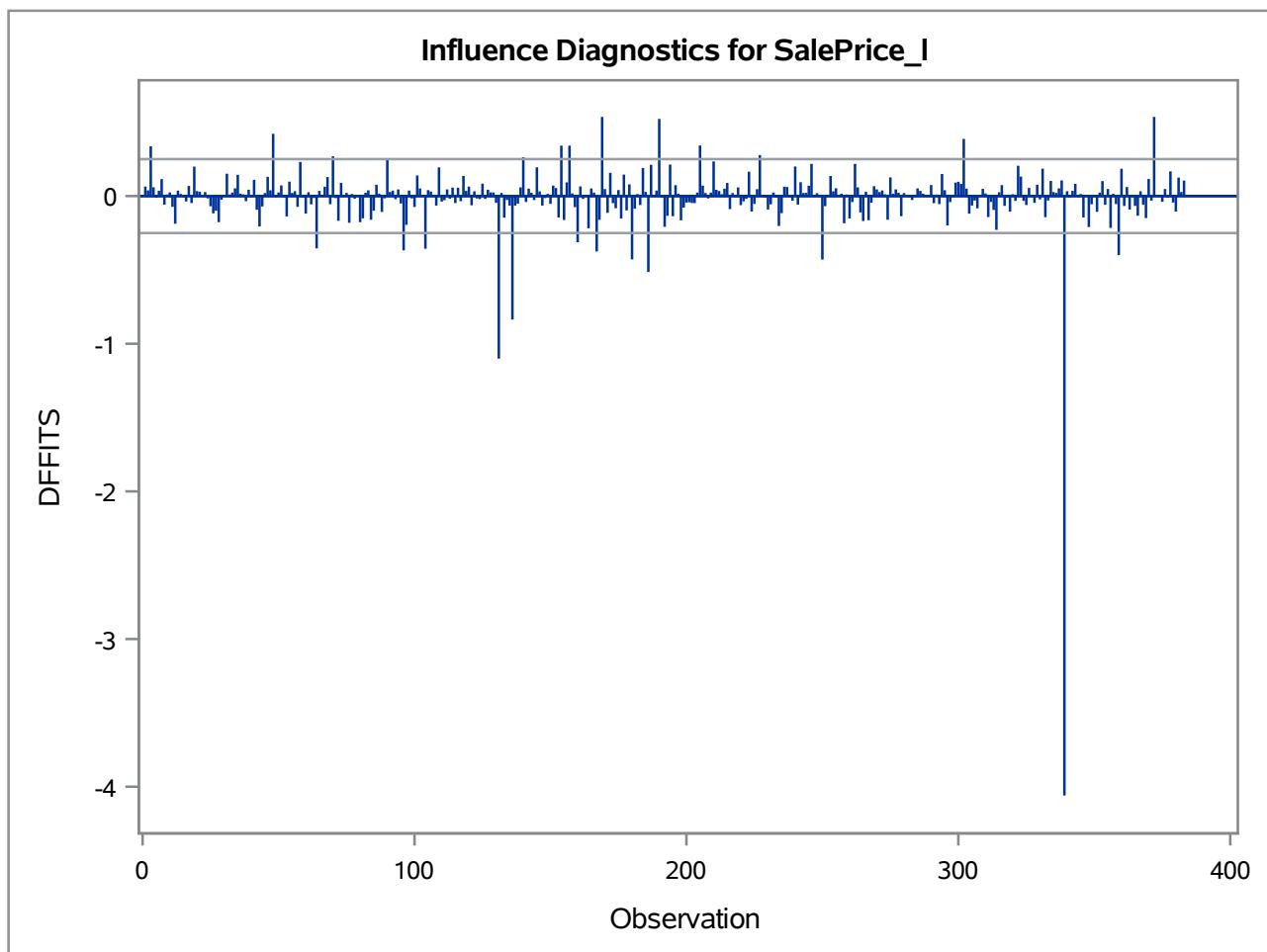
## Log-Linear MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**



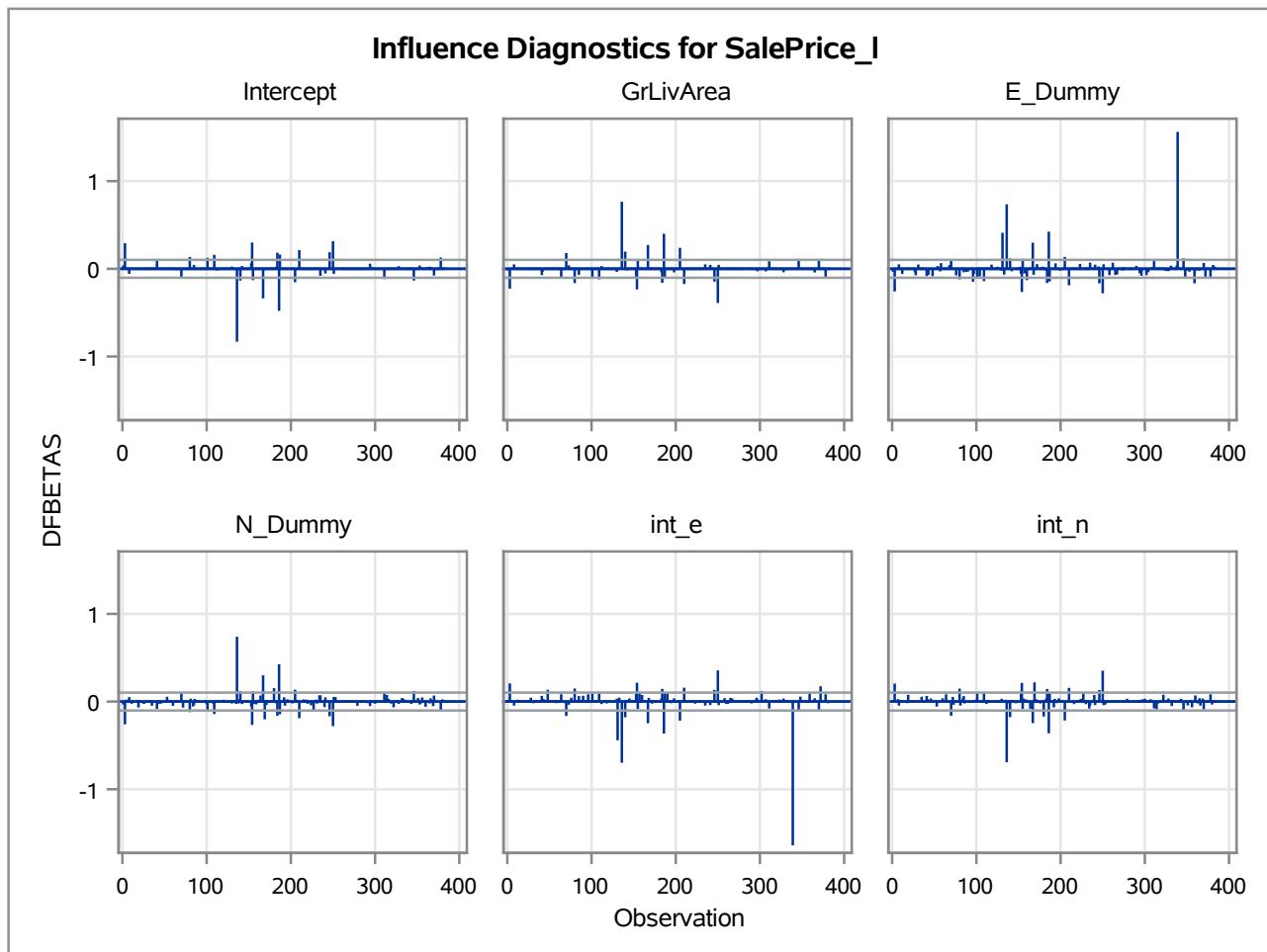
**Log-Linear MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



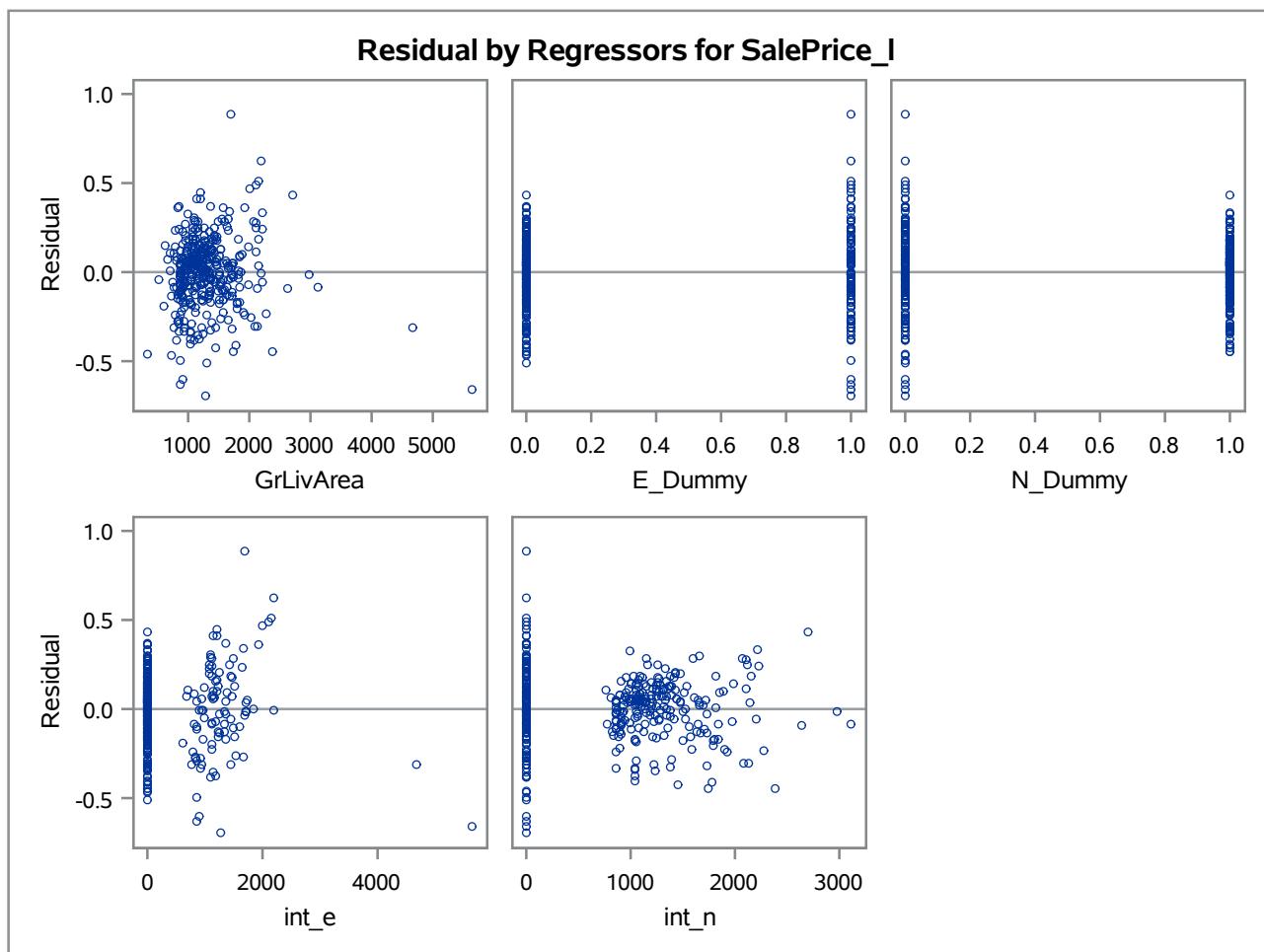
**Log-Linear MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



**Log-Linear MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



## Linear-Log MLR with Dummy and Interactions

### The REG Procedure

Model: MODEL1

Dependent Variable: SalePrice

Number of Observations Read	383
Number of Observations Used	383

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
<b>Model</b>	5	2.590608E11	51812155999	65.75	<.0001
<b>Error</b>	377	2.970913E11	788040713		
<b>Corrected Total</b>	382	5.561521E11			

Root MSE	28072	R-Square	0.4658
Dependent Mean	138063	Adj R-Sq	0.4587
Coeff Var	20.33287		

Parameter Estimates								
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr >  t	Variance Inflation	95% Confidence Limits	
<b>Intercept</b>	1	-520838	73669	-7.07	<.0001	0	-665693	-375984
<b>GrLlvArea_I</b>	1	91771	10458	8.78	<.0001	5.16110	71208	112333
<b>E_Dummy</b>	1	144770	94300	1.54	0.1256	833.79515	-40649	330189
<b>N_Dummy</b>	1	115364	87582	1.32	0.1886	903.48340	-56846	287574
<b>int_e_I</b>	1	-21054	13317	-1.58	0.1147	848.24992	-47240	5131.39195
<b>int_n_I</b>	1	-14507	12384	-1.17	0.2421	923.19487	-38857	9842.13126

## Linear-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
1	10	118000	119899	3729	112567	127231	-1899	27823	-0.068	0.000
2	15	157000	145667	1872	141988	149347	11333	28010	0.405	0.000
3	16	132000	98608	4745	89277	107939	33392	27668	1.207	0.007
4	17	149000	128550	2389	123852	133247	20450	27970	0.731	0.001
5	20	139000	150796	1919	147023	154570	-11796	28006	-0.421	0.000
6	27	134800	120101	2896	114407	125795	14699	27922	0.526	0.000
7	29	207500	164555	2466	159706	169404	42945	27964	1.536	0.003
8	30	68500	53080	8969	35444	70716	15420	26601	0.580	0.006
9	34	165500	169240	2745	163842	174637	-3740	27938	-0.134	0.000
10	38	153000	148334	1884	144630	152038	4666	28009	0.167	0.000
11	39	109000	132525	2193	128212	136837	-23525	27986	-0.841	0.001
12	40	82000	122431	2887	116754	128108	-40431	27923	-1.448	0.004
13	41	160000	149926	1904	146182	153670	10074	28007	0.360	0.000
14	45	141000	139040	1961	135185	142895	1960	28004	0.070	0.000
15	52	114500	127969	3703	120688	135251	-13469	27827	-0.484	0.001
16	55	130000	151999	1945	148175	155822	-21999	28005	-0.786	0.000
17	56	180500	155606	2050	151574	159638	24894	27997	0.889	0.001
18	67	180000	189406	4181	181184	197628	-9406	27759	-0.339	0.000
19	71	244000	189964	4224	181658	198270	54036	27752	1.947	0.015
20	74	144900	134616	2105	130476	138755	10284	27993	0.367	0.000
21	77	135750	124441	2623	119284	129598	11309	27949	0.405	0.000
22	78	127000	136104	3903	128429	143779	-9104	27799	-0.327	0.000
23	81	193500	187096	4005	179221	194971	6404	27785	0.230	0.000
24	84	126500	133107	2168	128845	137369	-6607	27988	-0.236	0.000
25	91	109900	131272	2251	126845	135698	-21372	27982	-0.764	0.001
26	92	98600	144549	1875	140863	148236	-45949	28009	-1.641	0.002
27	98	94750	109538	3553	102551	116525	-14788	27846	-0.531	0.001
28	99	83000	99673	4354	91111	108235	-16673	27732	-0.601	0.001
29	100	128950	143921	1879	140227	147615	-14971	28009	-0.535	0.000
30	111	136900	156119	4297	147671	164568	-19219	27741	-0.693	0.002
31	118	155000	120754	2939	114975	126533	34246	27918	1.227	0.003
32	123	136000	134188	2122	130015	138361	1812	27992	0.065	0.000

## Linear-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
33	129	155000	151314	1929	147520	155108	3686	28006	0.132	0.000
34	130	150000	132232	2206	127893	136570	17768	27985	0.635	0.000
35	131	226000	187635	4046	179679	195591	38365	27779	1.381	0.007
36	133	150750	150101	1907	146352	153850	649.1691	28007	0.023	0.000
37	137	143000	143224	1885	139518	146931	-224.3943	28009	-0.008	0.000
38	141	115000	116947	3108	110836	123057	-1947	27900	-0.070	0.000
39	143	166000	153406	1981	149511	157301	12594	28002	0.450	0.000
40	146	130000	150322	3811	142829	157815	-20322	27812	-0.731	0.002
41	147	105000	100837	4590	91813	109862	4163	27694	0.150	0.000
42	150	115000	140224	4082	132197	148250	-25224	27774	-0.908	0.003
43	156	79000	118907	3010	112989	124825	-39907	27910	-1.430	0.004
44	157	109500	131272	2251	126845	135698	-21772	27982	-0.778	0.001
45	166	127500	133909	2885	128237	139580	-6409	27923	-0.230	0.000
46	172	215000	167213	2620	162061	172366	47787	27949	1.710	0.004
47	174	163000	152112	1947	148283	155941	10888	28004	0.389	0.000
48	176	243000	166819	5304	156389	177248	76181	27566	2.764	0.047
49	183	120000	133121	2865	127488	138754	-13121	27926	-0.470	0.000
50	185	127000	133716	3822	126200	141232	-6716	27811	-0.242	0.000
51	192	184000	158480	2163	154227	162733	25520	27989	0.912	0.001
52	194	130000	150322	3811	142829	157815	-20322	27812	-0.731	0.002
53	198	235000	215956	6303	203563	228349	19044	27355	0.696	0.004
54	201	140000	120502	2948	114706	126298	19498	27917	0.698	0.001
55	208	141000	135605	2068	131540	139671	5395	27996	0.193	0.000
56	210	145000	135041	2089	130934	139148	9959	27994	0.356	0.000
57	211	98000	102087	4143	93941	110234	-4087	27765	-0.147	0.000
58	212	186000	126022	2819	120479	131564	59978	27930	2.147	0.008
59	216	134450	144612	1874	140926	148298	-10162	28009	-0.363	0.000
60	224	97000	116947	3108	110836	123057	-19947	27900	-0.715	0.001
61	231	148000	141941	1901	138202	145679	6059	28008	0.216	0.000
62	240	113000	140482	3150	134288	146677	-27482	27895	-0.985	0.002
63	248	140000	152846	1966	148981	156711	-12846	28003	-0.459	0.000
64	251	76500	137591	3962	129800	145383	-61091	27791	-2.198	0.016

## Linear-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
65	254	158000	148631	1887	144922	152341	9369	28009	0.334	0.000
66	255	145000	149340	1895	145613	153067	-4340	28008	-0.155	0.000
67	261	176000	153239	1976	149353	157124	22761	28002	0.813	0.001
68	270	148000	119996	2966	114163	125828	28004	27915	1.003	0.002
69	274	139000	166085	2554	161064	171107	-27085	27956	-0.969	0.001
70	276	205000	153192	4902	143553	162831	51808	27641	1.874	0.018
71	287	159000	170770	2842	165180	176359	-11770	27928	-0.421	0.000
72	288	88000	116408	3145	110225	122592	-28408	27895	-1.018	0.002
73	290	153575	143707	4268	135316	152099	9868	27746	0.356	0.000
74	293	131000	150611	3834	143073	158149	-19611	27809	-0.705	0.002
75	295	167000	166652	2587	161565	171738	348.4830	27953	0.012	0.000
76	309	82500	101841	4164	93653	110029	-19341	27761	-0.697	0.002
77	312	132000	126047	2528	121076	131018	5953	27958	0.213	0.000
78	325	242000	212555	6025	200709	224401	29445	27418	1.074	0.009
79	328	145250	153294	1978	149406	157183	-8044	28002	-0.287	0.000
80	329	214500	182654	7550	167809	197499	31846	27038	1.178	0.018
81	331	119000	170502	2825	164947	176057	-51502	27930	-1.844	0.006
82	332	139000	132451	2197	128132	136770	6549	27986	0.234	0.000
83	340	155000	143288	1884	139583	146993	11712	28009	0.418	0.000
84	343	87500	131272	2251	126845	135698	-43772	27982	-1.564	0.003
85	346	140200	154895	5032	145001	164790	-14695	27617	-0.532	0.002
86	347	151500	124926	2594	119826	130026	26574	27952	0.951	0.001
87	348	157500	158427	2161	154179	162676	-927.4224	27989	-0.033	0.000
88	353	95000	119868	2971	114026	125711	-24868	27914	-0.891	0.001
89	362	145000	150607	4713	141340	159874	-5607	27674	-0.203	0.000
90	363	198500	158629	4522	149736	167521	39871	27705	1.439	0.009
91	367	159000	153907	1995	149983	157830	5093	28001	0.182	0.000
92	368	165000	155931	2062	151876	159985	9069	27996	0.324	0.000
93	369	132000	146587	1873	142905	150269	-14587	28010	-0.521	0.000
94	370	162000	147736	1878	144042	151430	14264	28009	0.509	0.000
95	374	123000	149634	1899	145899	153369	-26634	28008	-0.951	0.001
96	376	61000	105288	3877	97665	112911	-44288	27803	-1.593	0.008

## Linear-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
97	387	81000	124369	2843	118779	129959	-43369	27928	-1.553	0.004
98	388	125000	120754	2939	114975	126533	4246	27918	0.152	0.000
99	391	119000	134532	2902	128826	140238	-15532	27922	-0.556	0.001
100	393	106500	118540	3000	112642	124438	-12040	27911	-0.431	0.000
101	394	100000	91226	5315	80775	101678	8774	27564	0.318	0.001
102	396	129000	121938	2901	116234	127643	7062	27922	0.253	0.000
103	398	169500	174169	3068	168136	180202	-4669	27904	-0.167	0.000
104	411	60000	129661	2812	124131	135190	-69661	27931	-2.494	0.011
105	419	126000	121317	2920	115575	127060	4683	27920	0.168	0.000
106	420	142000	132451	2197	128132	136770	9549	27986	0.341	0.000
107	425	139000	142070	1899	138336	145805	-3070	28008	-0.110	0.000
108	428	109008	120700	2857	115082	126317	-11692	27926	-0.419	0.000
109	438	119000	103829	4395	95188	112471	15171	27726	0.547	0.001
110	440	110000	125082	2831	119515	130648	-15082	27929	-0.540	0.000
111	442	118000	138211	3039	132235	144187	-20211	27907	-0.724	0.001
112	443	162900	154662	5014	144803	164521	8238	27621	0.298	0.000
113	446	127500	149490	3746	142125	156855	-21990	27821	-0.790	0.002
114	447	190000	177344	3288	170878	183809	12656	27879	0.454	0.000
115	460	110000	130052	3734	122711	137394	-20052	27823	-0.721	0.002
116	467	167000	147133	1875	143447	150820	19867	28009	0.709	0.000
117	468	146500	166652	2587	161565	171738	-20152	27953	-0.721	0.001
118	473	148000	117341	3080	111284	123398	30659	27903	1.099	0.002
119	486	147000	136513	2036	132510	140516	10487	27998	0.375	0.000
120	487	156000	133685	2143	129472	137899	22315	27990	0.797	0.001
121	492	133000	163486	2407	158752	168219	-30486	27969	-1.090	0.001
122	494	155000	146648	1873	142966	150330	8352	28010	0.298	0.000
123	498	184000	168047	6151	155952	180142	15953	27390	0.582	0.003
124	500	120000	121124	2830	115561	126688	-1124	27929	-0.040	0.000
125	503	140000	126138	2818	120598	131678	13862	27930	0.496	0.000
126	510	124500	131346	2248	126926	135766	-6846	27982	-0.245	0.000
127	511	164900	152169	1949	148338	156000	12731	28004	0.455	0.000
128	513	129900	116947	3108	110836	123057	12953	27900	0.464	0.000

## Linear-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
129	522	150000	145110	1873	141429	148792	4890	28010	0.175	0.000
130	523	159000	159823	5430	149147	170500	-823.4350	27542	-0.030	0.000
131	524	184750	221501	11233	199414	243588	-36751	25727	-1.429	0.065
132	527	132000	122468	2744	117072	127864	9532	27938	0.341	0.000
133	529	86000	76888	6611	63889	89887	9112	27283	0.334	0.001
134	532	128000	141444	4144	133297	149592	-13444	27765	-0.484	0.001
135	533	107500	113565	3344	106990	120140	-6065	27872	-0.218	0.000
136	534	39300	12454	13326	-13748	38657	26846	24707	1.087	0.057
137	536	107500	133490	2874	127839	139140	-25990	27925	-0.931	0.002
138	538	111250	116947	3108	110836	123057	-5697	27900	-0.204	0.000
139	544	133000	107746	3768	100336	115155	25254	27818	0.908	0.003
140	547	210000	158210	5296	147796	168624	51790	27568	1.879	0.022
141	554	108000	120817	2937	115042	126592	-12817	27918	-0.459	0.000
142	556	113000	117394	3782	109957	124831	-4394	27816	-0.158	0.000
143	557	141000	135041	2089	130934	139148	5959	27994	0.213	0.000
144	563	108000	112141	3376	105504	118779	-4141	27868	-0.149	0.000
145	564	185000	148859	3698	141589	156129	36141	27827	1.299	0.005
146	570	135960	123707	2667	118462	128952	12253	27945	0.438	0.000
147	571	142600	170502	2825	164947	176057	-27902	27930	-0.999	0.002
148	572	120000	116947	3108	110836	123057	3053	27900	0.109	0.000
149	575	139000	136235	2045	132213	140257	2765	27997	0.099	0.000
150	576	118500	143352	1884	139648	147055	-24852	28009	-0.887	0.001
151	581	181900	155822	2058	151776	159869	26078	27997	0.931	0.001
152	583	118500	98045	4501	89195	106895	20455	27709	0.738	0.002
153	585	133000	154662	5014	144803	164521	-21662	27621	-0.784	0.003
154	587	130000	96872	4872	87292	106453	33128	27646	1.198	0.007
155	590	79500	106924	4213	98639	115208	-27424	27754	-0.988	0.004
156	606	205000	181254	3569	174235	188272	23746	27844	0.853	0.002
157	608	225000	161724	4811	152265	171183	63276	27657	2.288	0.026
158	616	137500	132305	2203	127973	136637	5195	27985	0.186	0.000
159	618	105500	114031	3311	107521	120541	-8531	27876	-0.306	0.000
160	621	67000	102087	4143	93941	110234	-35087	27765	-1.264	0.006

## Linear-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
161	626	160000	136721	2029	132732	140710	23279	27999	0.831	0.001
162	627	139900	155443	2045	151423	159464	-15543	27997	-0.555	0.000
163	628	153000	160592	2259	156150	165035	-7592	27981	-0.271	0.000
164	629	135000	184827	3834	177288	192365	-49827	27809	-1.792	0.010
165	630	168500	151429	1932	147630	155227	17071	28006	0.610	0.000
166	634	139400	132451	2197	128132	136770	6949	27986	0.248	0.000
167	637	60000	92613	5203	82384	102843	-32613	27586	-1.182	0.008
168	639	85000	96290	4663	87122	105458	-11290	27682	-0.408	0.001
169	643	345000	205098	5420	194441	215754	139902	27544	5.079	0.166
170	646	143250	126759	2487	121868	131650	16491	27962	0.590	0.000
171	647	98300	131864	2223	127492	136236	-33564	27984	-1.199	0.002
172	648	155000	118778	3015	112849	124707	36222	27910	1.298	0.003
173	649	155000	175312	3146	169125	181499	-20312	27895	-0.728	0.001
174	652	108000	141568	3210	135256	147879	-33568	27888	-1.204	0.003
175	657	145500	132232	2206	127893	136570	13268	27985	0.474	0.000
176	659	97500	157375	2117	153212	161537	-59875	27992	-2.139	0.004
177	660	167000	140435	3148	134245	146624	26565	27895	0.952	0.002
178	663	110000	153796	1992	149879	157712	-43796	28001	-1.564	0.002
179	664	137500	124189	2846	118593	129786	13311	27927	0.477	0.000
180	667	129000	195236	4634	186124	204349	-66236	27687	-2.392	0.027
181	672	103600	134635	2905	128923	140348	-31035	27921	-1.112	0.002
182	675	140000	138094	1986	134188	141999	1906	28002	0.068	0.000
183	695	141500	152657	4862	143097	162217	-11157	27648	-0.404	0.001
184	697	89000	68628	7390	54097	83158	20372	27082	0.752	0.007
185	698	123500	122185	2894	116495	127876	1315	27922	0.047	0.000
186	711	52000	84084	5929	72427	95742	-32084	27439	-1.169	0.011
187	714	129000	109345	4087	101309	117381	19655	27773	0.708	0.002
188	723	124500	116947	3108	110836	123057	7553	27900	0.271	0.000
189	724	135000	139669	3108	133557	145781	-4669	27899	-0.167	0.000
190	725	320000	149866	3775	142443	157288	170134	27817	6.116	0.115
191	726	120500	116947	3108	110836	123057	3553	27900	0.127	0.000
192	729	110000	172619	2964	166791	178446	-62619	27915	-2.243	0.009

# Linear-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
193	737	93500	131272	2251	126845	135698	-37772	27982	-1.350	0.002
194	739	179000	125318	2828	119758	130878	53682	27929	1.922	0.006
195	750	98000	142452	3261	136040	148864	-44452	27882	-1.594	0.006
196	755	156000	130225	2302	125698	134752	25775	27977	0.921	0.001
197	761	127500	116947	3108	110836	123057	10553	27900	0.378	0.000
198	762	100000	137239	3948	129477	145002	-37239	27793	-1.340	0.006
199	772	102000	126487	2814	120953	132021	-24487	27931	-0.877	0.001
200	773	107000	120249	2957	114435	126064	-13249	27916	-0.475	0.000
201	774	114500	121124	2830	115561	126688	-6624	27929	-0.237	0.000
202	798	110000	108348	3724	101026	115669	1652	27824	0.059	0.000
203	805	118000	137548	2003	133610	141485	-19548	28001	-0.698	0.000
204	807	135500	126681	2492	121781	131580	8819	27961	0.315	0.000
205	808	223500	154837	5028	144952	164723	68663	27618	2.486	0.034
206	809	159950	134616	2105	130476	138755	25334	27993	0.905	0.001
207	814	157900	156522	2084	152425	160620	1378	27995	0.049	0.000
208	815	116000	128205	2807	122685	133724	-12205	27931	-0.437	0.000
209	817	137000	128857	2373	124192	133522	8143	27972	0.291	0.000
210	827	109500	90759	5354	80232	101287	18741	27557	0.680	0.003
211	831	166000	153796	1992	149879	157712	12204	28001	0.436	0.000
212	834	167000	160389	2250	155965	164812	6611	27982	0.236	0.000
213	835	139950	138636	1971	134760	142512	1314	28003	0.047	0.000
214	840	130500	125318	2828	119758	130878	5182	27929	0.186	0.000
215	843	174900	140041	1937	136233	143849	34859	28005	1.245	0.001
216	844	141000	173656	3033	167691	179620	-32656	27908	-1.170	0.003
217	854	158000	156683	2090	152573	160792	1317	27994	0.047	0.000
218	864	132500	138905	1964	135044	142767	-6405	28003	-0.229	0.000
219	866	148500	128396	2397	123682	133109	20104	27970	0.719	0.001
220	871	109500	119584	2930	113823	125345	-10084	27919	-0.361	0.000
221	873	116000	120955	2841	115369	126540	-4955	27928	-0.177	0.000
222	874	133000	146587	1873	142905	150269	-13587	28010	-0.485	0.000
223	881	157000	118519	3027	112568	124470	38481	27908	1.379	0.004
224	885	100000	119411	2941	113627	125195	-19411	27918	-0.695	0.001

# Linear-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
225	887	145000	169783	2779	164318	175248	-24783	27934	-0.887	0.001
226	888	135500	135864	2945	130073	141656	-364.4412	27917	-0.013	0.000
227	889	268000	189755	4208	181480	198030	78245	27755	2.819	0.030
228	890	149500	159826	2223	155455	164197	-10326	27984	-0.369	0.000
229	891	122900	122134	2765	116697	127571	765.6917	27936	0.027	0.000
230	896	140000	173484	3022	167542	179425	-33484	27909	-1.200	0.003
231	901	110000	116408	3145	110225	122592	-6408	27895	-0.230	0.000
232	902	153000	148868	1889	145153	152583	4132	28008	0.148	0.000
233	906	128000	132962	2174	128687	137236	-4962	27988	-0.177	0.000
234	911	154300	191716	4360	183144	200289	-37416	27731	-1.349	0.007
235	913	88000	114458	3871	106846	122069	-26458	27804	-0.952	0.003
236	918	135000	127007	2811	121480	132533	7993	27931	0.286	0.000
237	920	176500	155007	2030	151016	158999	21493	27999	0.768	0.001
238	922	145900	168182	5440	157486	178878	-22282	27540	-0.809	0.004
239	932	117500	122218	2760	116791	127645	-4718	27936	-0.169	0.000
240	935	242000	184417	3803	176939	191895	57583	27813	2.070	0.013
241	936	79900	86323	5731	75054	97592	-6423	27481	-0.234	0.000
242	943	150000	138211	3039	132235	144187	11789	27907	0.422	0.000
243	947	143000	138636	1971	134760	142512	4364	28003	0.156	0.000
244	951	129000	116947	3108	110836	123057	12053	27900	0.432	0.000
245	955	127500	110996	3452	104209	117783	16504	27859	0.592	0.001
246	961	116500	99037	4715	89766	108307	17463	27673	0.631	0.002
247	968	135000	135465	2073	131389	139541	-464.8162	27995	-0.017	0.000
248	970	140000	135253	2081	131162	139345	4747	27995	0.170	0.000
249	971	135000	141811	1903	138069	145554	-6811	28007	-0.243	0.000
250	975	167500	177570	7050	163708	191432	-10070	27172	-0.371	0.002
251	977	85500	100206	4633	91096	109315	-14706	27687	-0.531	0.001
252	979	110000	104501	3941	96753	112249	5499	27794	0.198	0.000
253	981	178400	128164	2410	123426	132902	50236	27968	1.796	0.004
254	986	125000	123164	2868	117524	128804	1836	27925	0.066	0.000
255	993	187000	175814	3181	169559	182070	11186	27891	0.401	0.000
256	996	121600	132089	3778	124662	139517	-10489	27817	-0.377	0.000

## Linear-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
257	997	136500	132011	2217	127653	136369	4489	27984	0.160	0.000
258	1001	82000	108349	3640	101193	115506	-26349	27835	-0.947	0.003
259	1007	163500	167260	2623	162102	172418	-3760	27949	-0.135	0.000
260	1012	100000	148435	3666	141228	155643	-48435	27832	-1.740	0.009
261	1015	119200	134331	2117	130169	138492	-15131	27992	-0.541	0.000
262	1021	176000	121193	2924	115443	126943	54807	27919	1.963	0.007
263	1027	167500	146343	1872	142662	150024	21157	28010	0.755	0.000
264	1029	105000	152902	1967	149035	156770	-47902	28003	-1.711	0.002
265	1036	84000	100515	4280	92100	108930	-16515	27744	-0.595	0.001
266	1046	139600	151309	3889	143661	158956	-11709	27801	-0.421	0.001
267	1050	84900	107293	3719	99979	114606	-22393	27825	-0.805	0.002
268	1053	165000	180903	3544	173935	187871	-15903	27847	-0.571	0.001
269	1054	144500	142313	3253	135917	148709	2187	27883	0.078	0.000
270	1065	154000	139308	1954	135466	143150	14692	28004	0.525	0.000
271	1068	167900	165085	2496	160177	169993	2815	27961	0.101	0.000
272	1070	135000	119498	2936	113725	125270	15502	27918	0.555	0.001
273	1071	135000	131864	2223	127492	136236	3136	27984	0.112	0.000
274	1073	91500	138992	3075	132945	145040	-47492	27903	-1.702	0.006
275	1074	159500	137520	3009	131603	143437	21980	27910	0.788	0.001
276	1078	138800	135324	2078	131238	139410	3476	27995	0.124	0.000
277	1084	160000	145544	1872	141864	149224	14456	28010	0.516	0.000
278	1089	137500	150322	3811	142829	157815	-12822	27812	-0.461	0.001
279	1091	92900	131272	2251	126845	135698	-38372	27982	-1.371	0.002
280	1094	146000	142328	1896	138601	146056	3672	28008	0.131	0.000
281	1095	129000	123131	2703	117817	128446	5869	27942	0.210	0.000
282	1099	128000	138848	4017	130949	146746	-10848	27783	-0.390	0.001
283	1102	119500	124278	2633	119102	129455	-4778	27948	-0.171	0.000
284	1103	135000	137957	1990	134044	141871	-2957	28001	-0.106	0.000
285	1104	159500	141941	1901	138202	145679	17559	28008	0.627	0.000
286	1113	129900	112531	3418	105810	119251	17369	27863	0.623	0.001
287	1114	134500	128857	2373	124192	133522	5643	27972	0.202	0.000
288	1120	133700	131272	2251	126845	135698	2428	27982	0.087	0.000

# Linear-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
289	1123	112000	109538	3553	102551	116525	2462	27846	0.088	0.000
290	1124	118000	87000	5566	76055	97944	31000	27515	1.127	0.009
291	1126	115000	128627	2385	123937	133316	-13627	27971	-0.487	0.000
292	1136	102000	111798	3974	103983	119612	-9798	27789	-0.353	0.000
293	1137	119000	145606	1872	141926	149286	-26606	28010	-0.950	0.001
294	1140	144000	127264	3696	119996	134532	16736	27828	0.601	0.001
295	1141	139000	124441	2623	119284	129598	14559	27949	0.521	0.000
296	1145	80000	106835	3755	99452	114218	-26835	27820	-0.965	0.003
297	1146	149000	154837	5028	144952	164723	-5837	27618	-0.211	0.000
298	1151	124000	122800	2723	117446	128155	1200	27940	0.043	0.000
299	1152	149900	139476	3099	133383	145570	10424	27900	0.374	0.000
300	1155	201800	174510	3091	168431	180588	27290	27901	0.978	0.002
301	1157	179900	146404	1872	142723	150085	33496	28010	1.196	0.001
302	1169	235000	165161	5141	155052	175270	69839	27597	2.531	0.037
303	1172	163000	146159	1872	142479	149839	16841	28010	0.601	0.000
304	1180	93000	120691	2941	114908	126474	-27691	27918	-0.992	0.002
305	1186	104900	126545	2814	121012	132078	-21645	27931	-0.775	0.001
306	1201	116050	116947	3108	110836	123057	-896.9057	27900	-0.032	0.000
307	1203	117000	140496	4095	132444	148549	-23496	27772	-0.846	0.003
308	1209	140000	147496	1877	143805	151186	-7496	28009	-0.268	0.000
309	1213	113000	84315	5838	72835	95795	28685	27458	1.045	0.008
310	1215	134500	128164	2410	123426	132902	6336	27968	0.227	0.000
311	1219	80500	104638	4346	96094	113183	-24138	27734	-0.870	0.003
312	1221	115000	121124	2830	115561	126688	-6124	27929	-0.219	0.000
313	1223	143000	175605	3167	169379	181832	-32605	27893	-1.169	0.003
314	1224	137900	186879	3989	179036	194722	-48979	27787	-1.763	0.011
315	1226	145000	138229	1982	134331	142127	6771	28002	0.242	0.000
316	1228	147000	121124	2830	115561	126688	25876	27929	0.926	0.001
317	1230	127000	159929	2228	155548	164309	-32929	27984	-1.177	0.001
318	1232	132500	141682	1905	137935	145428	-9182	28007	-0.328	0.000
319	1233	101800	143858	1879	140163	147553	-42058	28009	-1.502	0.002
320	1234	142000	141552	1907	137801	145302	448.3149	28007	0.016	0.000

# Linear-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
321	1250	119000	127309	2457	122478	132139	-8309	27964	-0.297	0.000
322	1251	244000	185933	3917	178231	193635	58067	27797	2.089	0.014
323	1255	165400	148095	3640	140937	155252	17305	27835	0.622	0.001
324	1256	127500	141781	4161	133599	149963	-14281	27762	-0.514	0.001
325	1258	99900	102087	4143	93941	110234	-2187	27765	-0.079	0.000
326	1260	151000	132305	2203	127973	136637	18695	27985	0.668	0.000
327	1262	128900	132011	2217	127653	136369	-3111	27984	-0.111	0.000
328	1264	180500	168249	6169	156118	180380	12251	27386	0.447	0.002
329	1265	181000	150681	1917	146912	154450	30319	28007	1.083	0.001
330	1270	144000	160795	2269	156334	165257	-16795	27980	-0.600	0.000
331	1274	177000	134013	2887	128336	139690	42987	27923	1.539	0.004
332	1276	137000	178642	3381	171995	185289	-41642	27868	-1.494	0.005
333	1286	132500	144753	4329	136241	153265	-12253	27736	-0.442	0.001
334	1291	180500	139174	1957	135326	143023	41326	28004	1.476	0.002
335	1295	115000	102087	4143	93941	110234	12913	27765	0.465	0.001
336	1296	138500	132158	2210	127813	136503	6342	27985	0.227	0.000
337	1297	155000	137548	2003	133610	141485	17452	28001	0.623	0.000
338	1298	140000	117341	3080	111284	123398	22659	27903	0.812	0.001
339	1299	160000	234781	12738	209735	259828	-74781	25016	-2.989	0.386
340	1300	154000	145235	1872	141553	148916	8765	28010	0.313	0.000
341	1305	130000	150281	3808	142794	157768	-20281	27813	-0.729	0.002
342	1315	119000	108648	3618	101535	115762	10352	27838	0.372	0.000
343	1316	206900	186006	3923	178293	193719	20894	27797	0.752	0.002
344	1320	111000	108648	3618	101535	115762	2352	27838	0.084	0.000
345	1321	156500	158427	2161	154179	162676	-1927	27989	-0.069	0.000
346	1322	72500	82944	6031	71086	94803	-10444	27417	-0.381	0.001
347	1324	82500	81402	6171	69268	93536	1098	27385	0.040	0.000
348	1327	79000	94308	4849	84773	103843	-15308	27650	-0.554	0.002
349	1333	100000	98045	4501	89195	106895	1955	27709	0.071	0.000
350	1341	123000	117659	3059	111644	123674	5341	27905	0.191	0.000
351	1351	200000	203071	5257	192735	213407	-3071	27575	-0.111	0.000
352	1352	171000	169963	2791	164476	175451	1037	27933	0.037	0.000

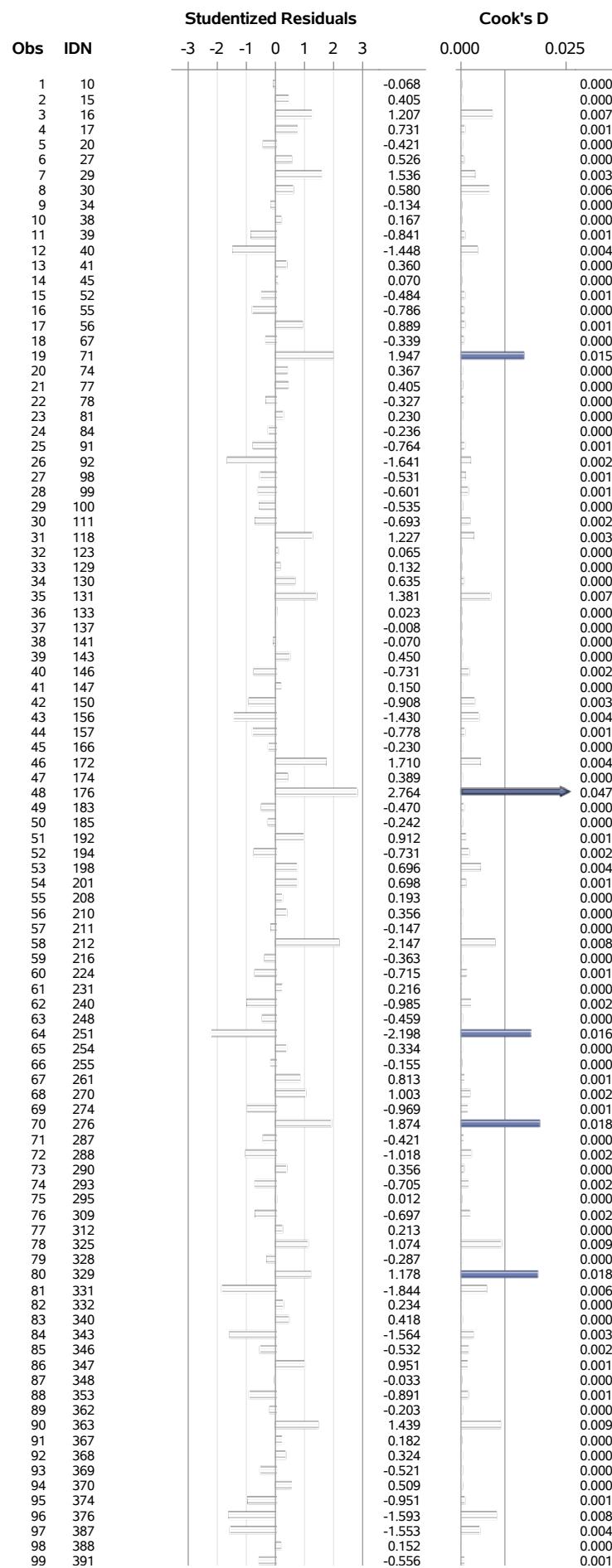
## Linear-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
353	1353	134900	127969	3703	120688	135251	6931	27827	0.249	0.000
354	1357	110000	119411	2941	113627	125195	-9411	27918	-0.337	0.000
355	1358	149900	134044	2128	129860	138229	15856	27991	0.566	0.000
356	1363	104900	170948	2854	165336	176559	-66048	27927	-2.365	0.010
357	1372	165500	167446	2634	162266	172626	-1946	27948	-0.070	0.000
358	1378	117000	145838	3479	138998	152678	-28838	27856	-1.035	0.003
359	1381	58500	102087	4143	93941	110234	-43587	27765	-1.570	0.009
360	1382	237500	186189	3936	178449	193929	51311	27795	1.846	0.011
361	1385	105000	128656	2808	123135	134176	-23656	27931	-0.847	0.001
362	1390	131000	131190	3757	123803	138576	-189.6600	27820	-0.007	0.000
363	1392	124000	163779	2423	159014	168544	-39779	27967	-1.422	0.003
364	1393	123000	120101	2896	114407	125795	2899	27922	0.104	0.000
365	1398	137500	151093	4748	141758	160429	-13593	27668	-0.491	0.001
366	1399	138000	177996	3334	171439	184552	-39996	27873	-1.435	0.005
367	1401	120000	126554	3691	119296	133812	-6554	27828	-0.236	0.000
368	1412	140000	167771	2654	162552	172990	-27771	27946	-0.994	0.001
369	1413	90000	131272	2251	126845	135698	-41272	27982	-1.475	0.002
370	1415	207000	169448	6280	157101	181796	37552	27361	1.372	0.017
371	1419	124000	138636	1971	134760	142512	-14636	28003	-0.523	0.000
372	1424	274970	168214	5443	157511	178916	106756	27539	3.876	0.098
373	1425	144000	151084	1925	147300	154869	-7084	28006	-0.253	0.000
374	1426	142000	145606	1872	141926	149286	-3606	28010	-0.129	0.000
375	1428	140000	162500	2355	157870	167131	-22500	27973	-0.804	0.001
376	1436	174000	161452	2301	156926	165977	12548	27978	0.449	0.000
377	1437	120500	116947	3108	110836	123057	3553	27900	0.127	0.000
378	1444	121000	108577	4125	100466	116689	12423	27767	0.447	0.001
379	1449	112000	133437	2872	127789	139085	-21437	27925	-0.768	0.001
380	1451	136000	173312	3010	167393	179230	-37312	27910	-1.337	0.003
381	1453	145000	117341	3080	111284	123398	27659	27903	0.991	0.002
382	1459	142125	134044	2128	129860	138229	8081	27991	0.289	0.000
383	1460	147500	128543	2807	123023	134064	18957	27931	0.679	0.001

**Linear-Log MLR with Dummy and Interactions****The REG Procedure****Model: MODEL1****Dependent Variable: SalePrice**

### Studentized Residuals and Cook's D for SalePrice



## Linear-Log MLR with Dummy and Interactions

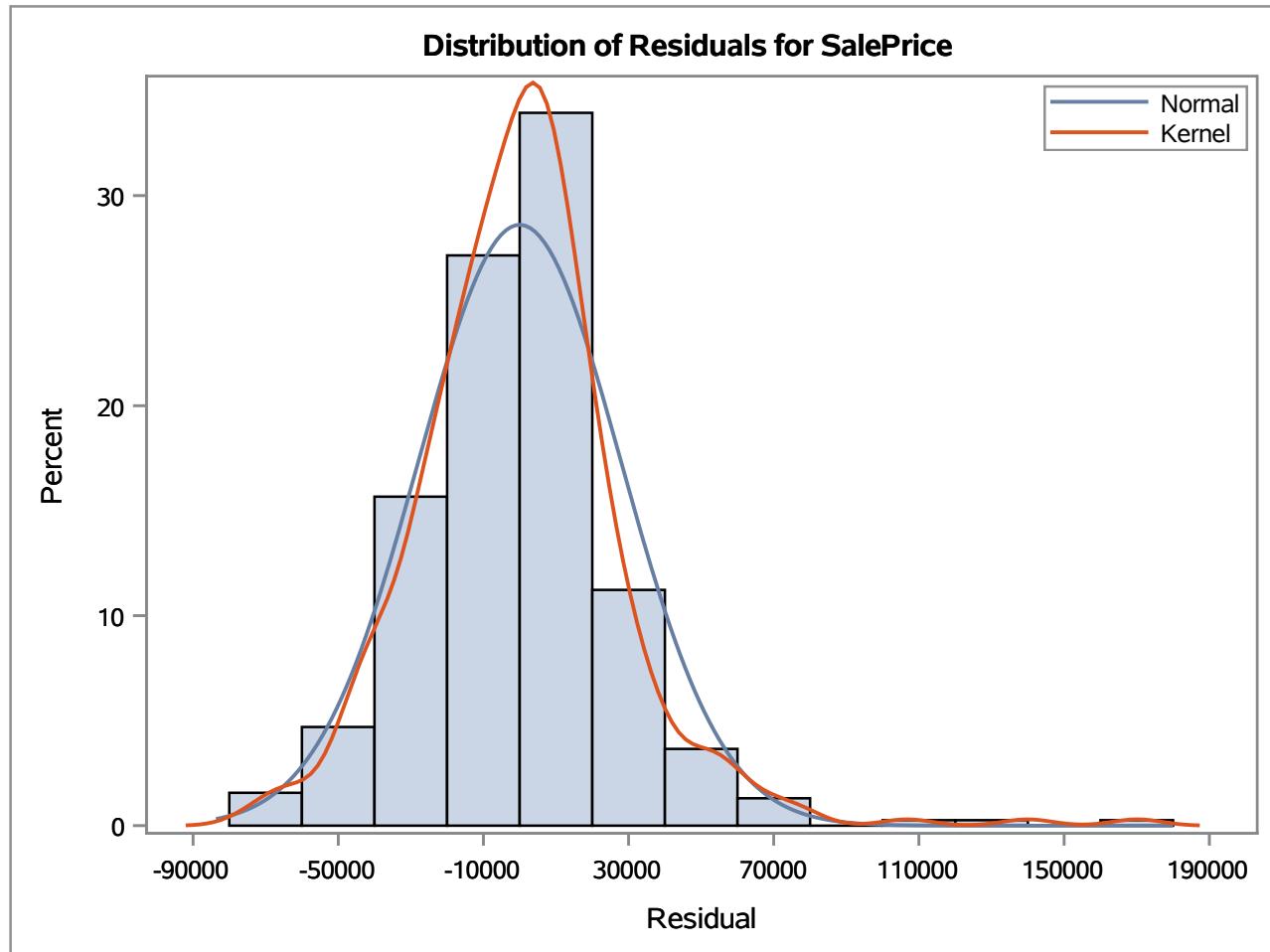
**The REG Procedure**

**Model: MODEL1**

**Dependent Variable: SalePrice**

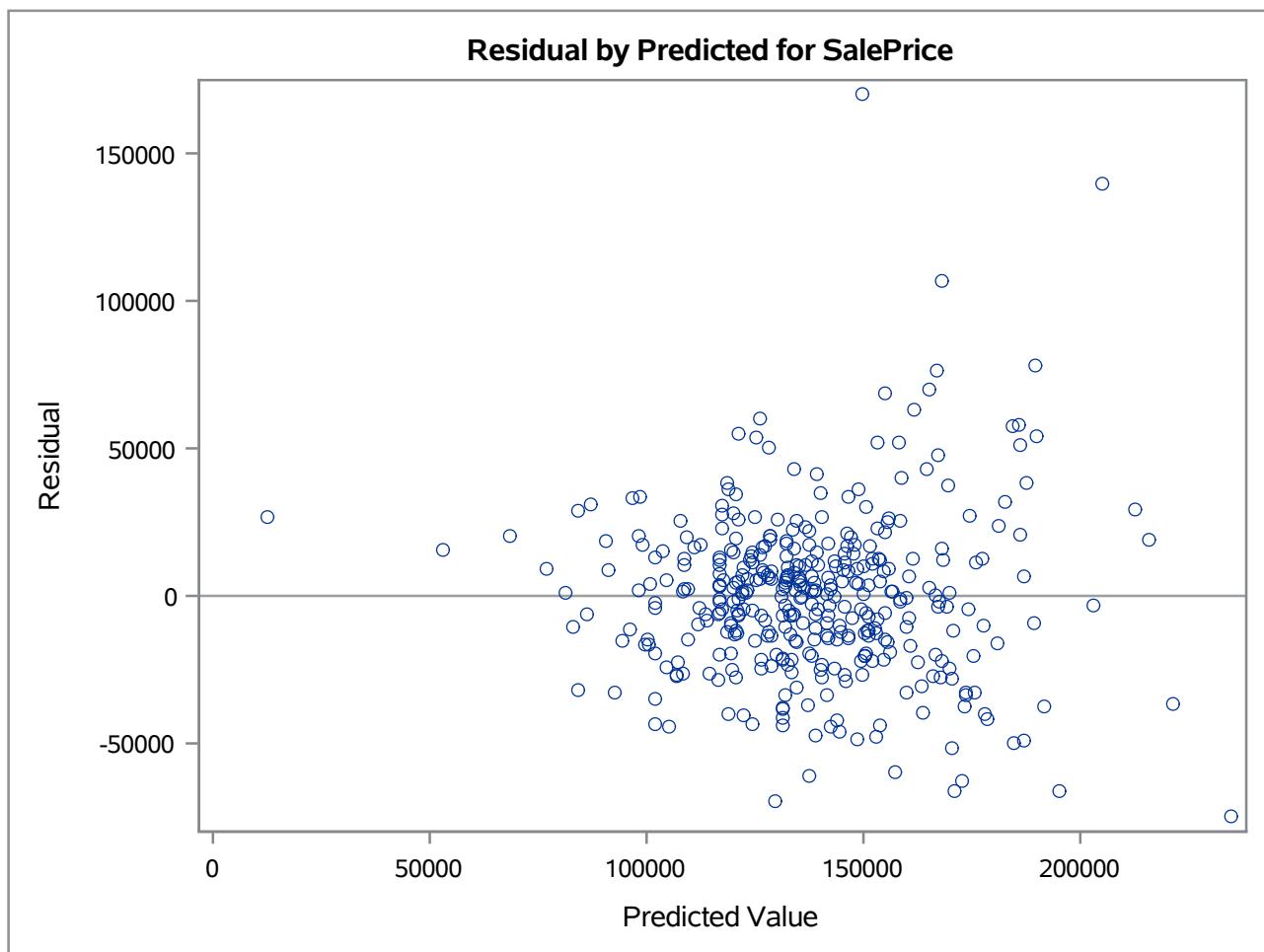
<b>Sum of Residuals</b>	-2.47865E-7
<b>Sum of Squared Residuals</b>	2.970913E11
<b>Predicted Residual SS (PRESS)</b>	3.129318E11

**Distribution of Residuals for SalePrice**



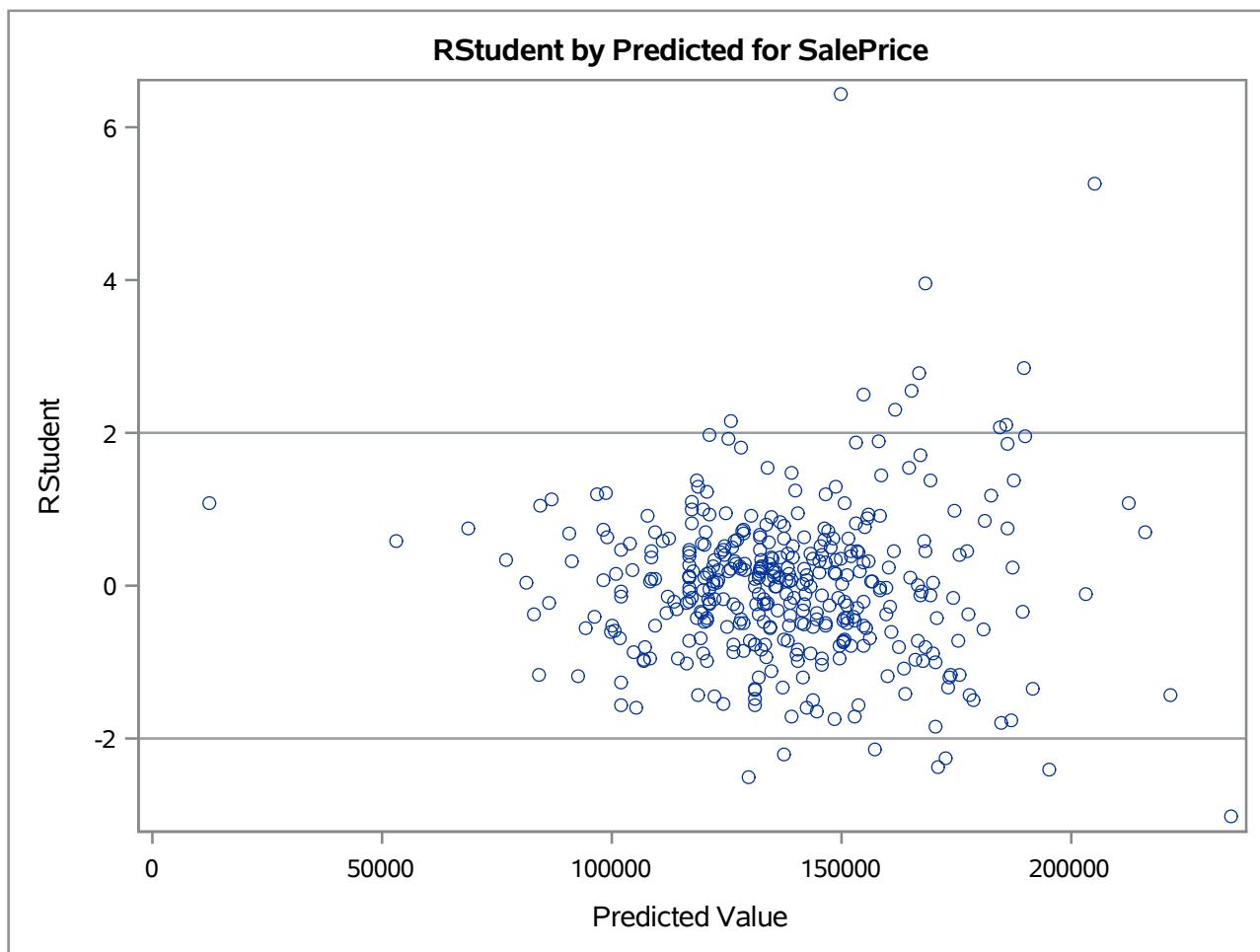
**Linear-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



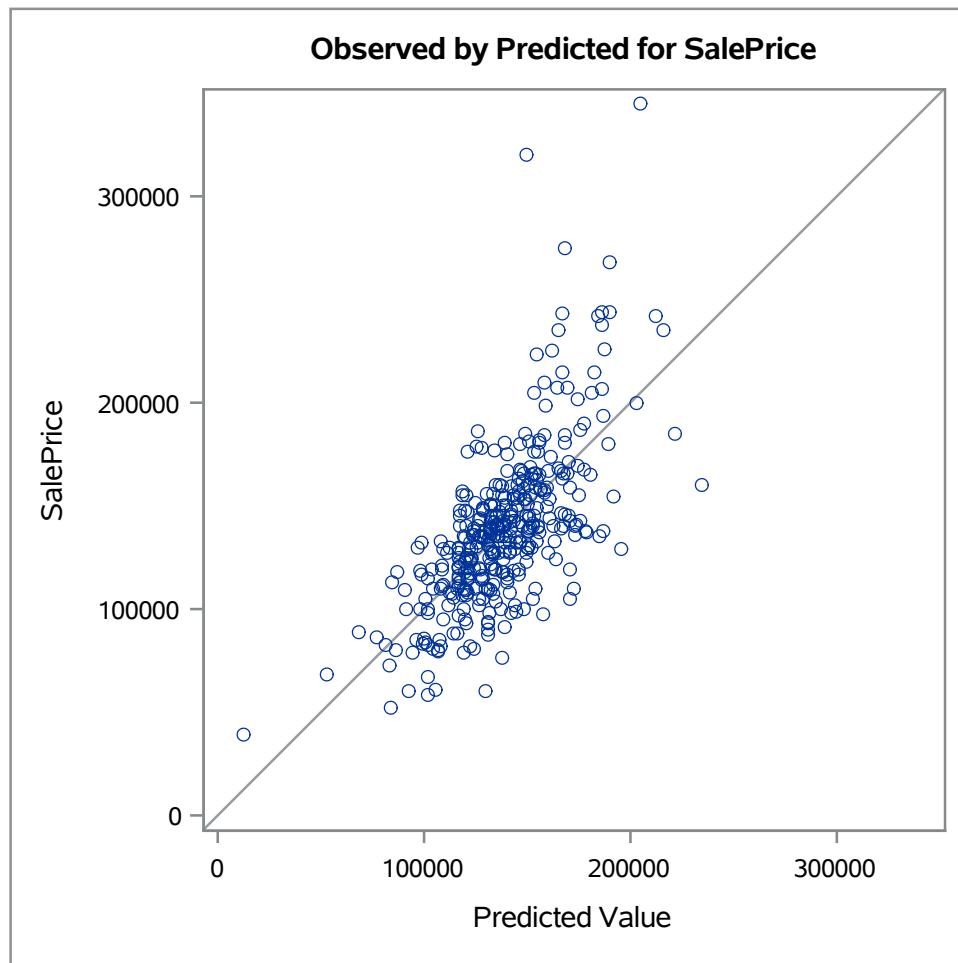
**Linear-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



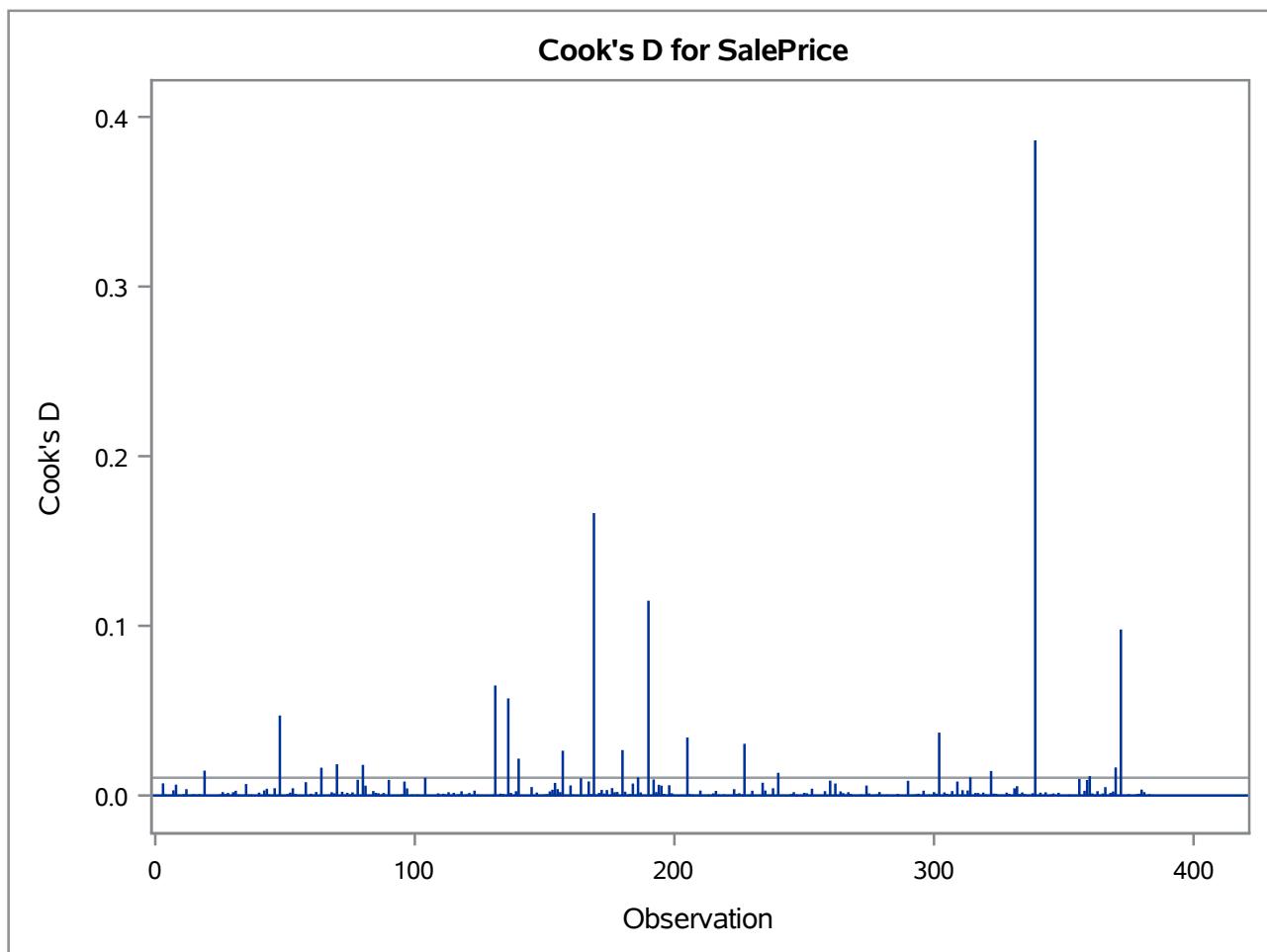
**Linear-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



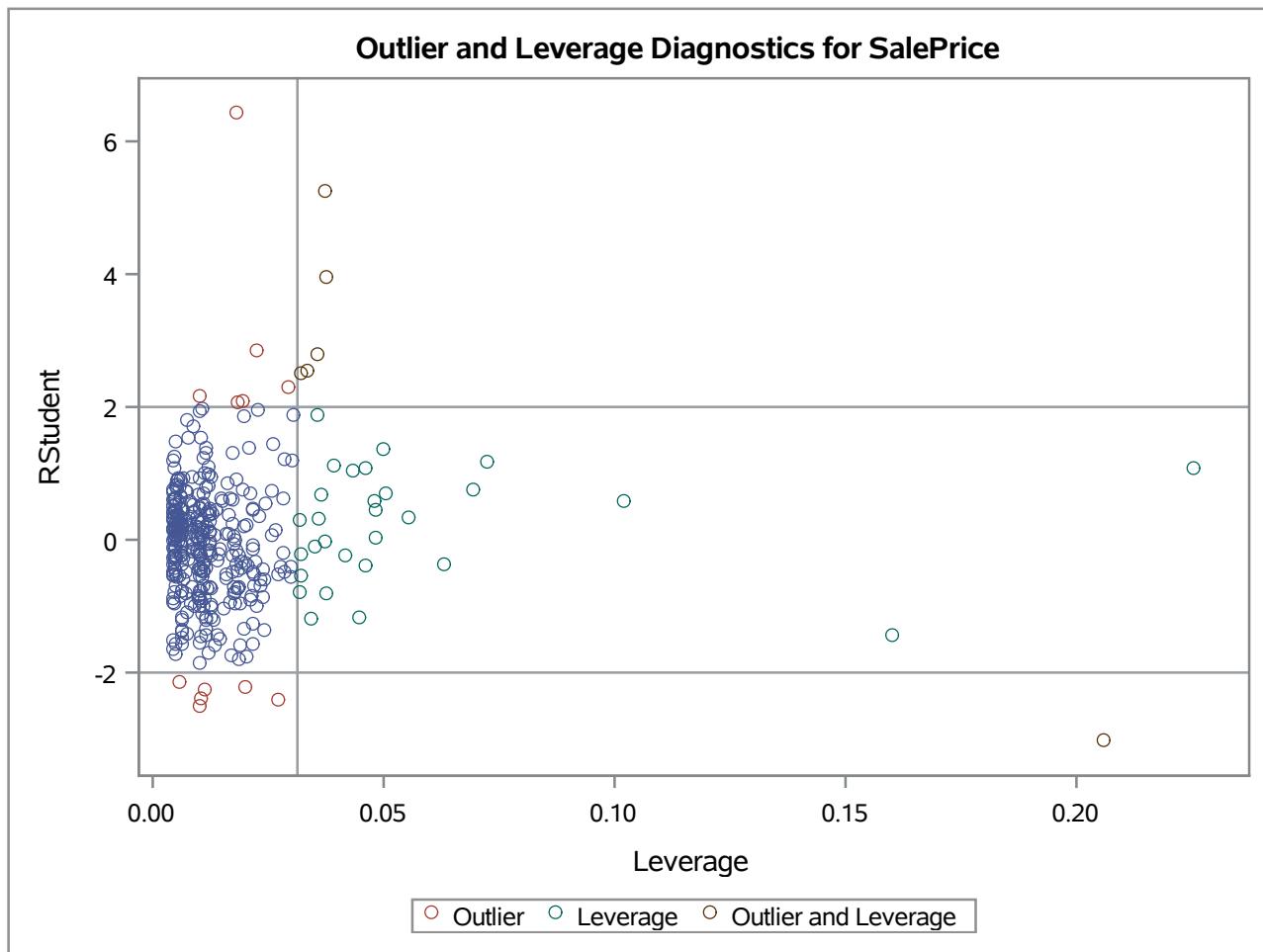
**Linear-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



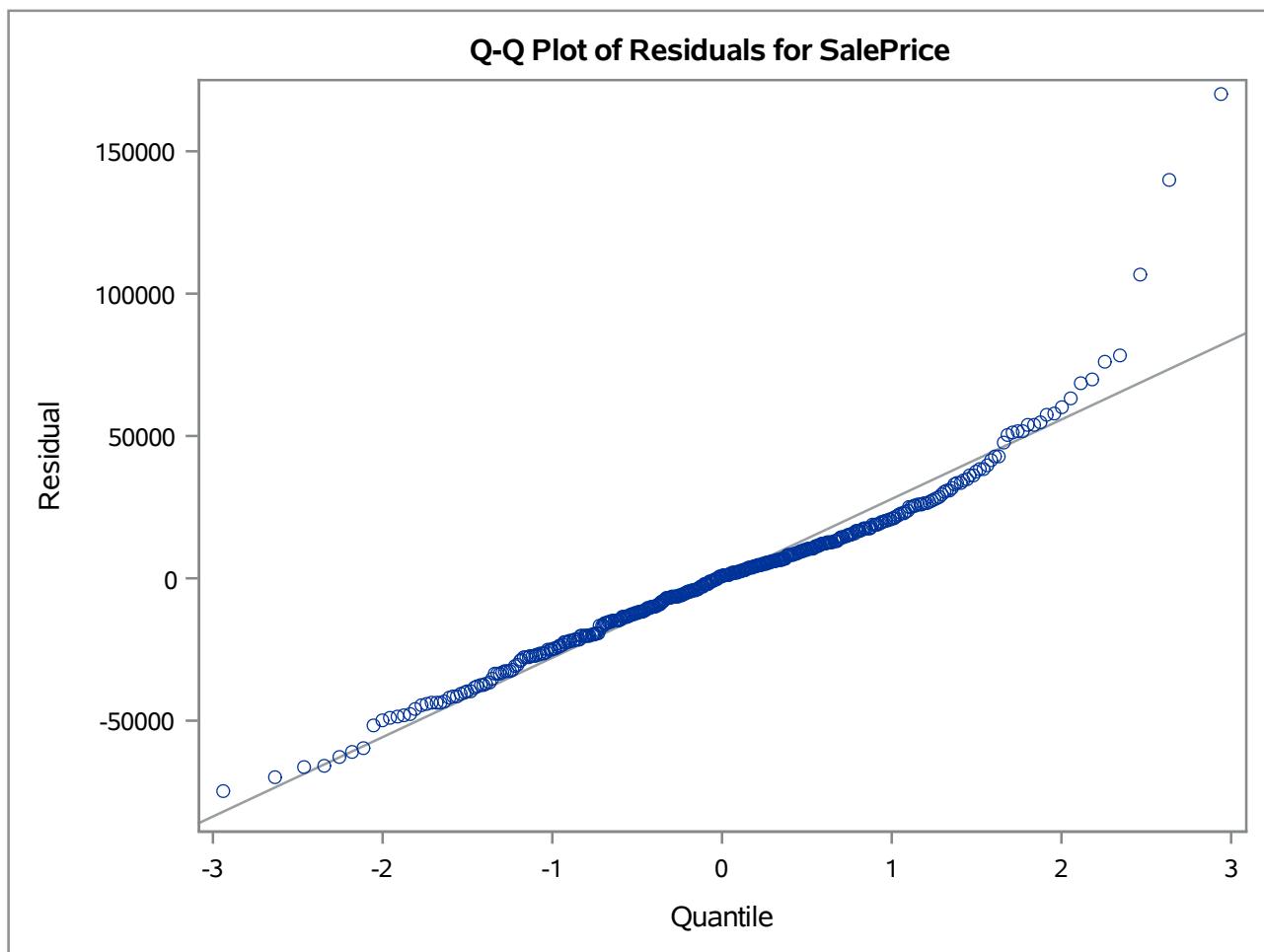
## Linear-Log MLR with Dummy and Interactions

The REG Procedure  
Model: MODEL1



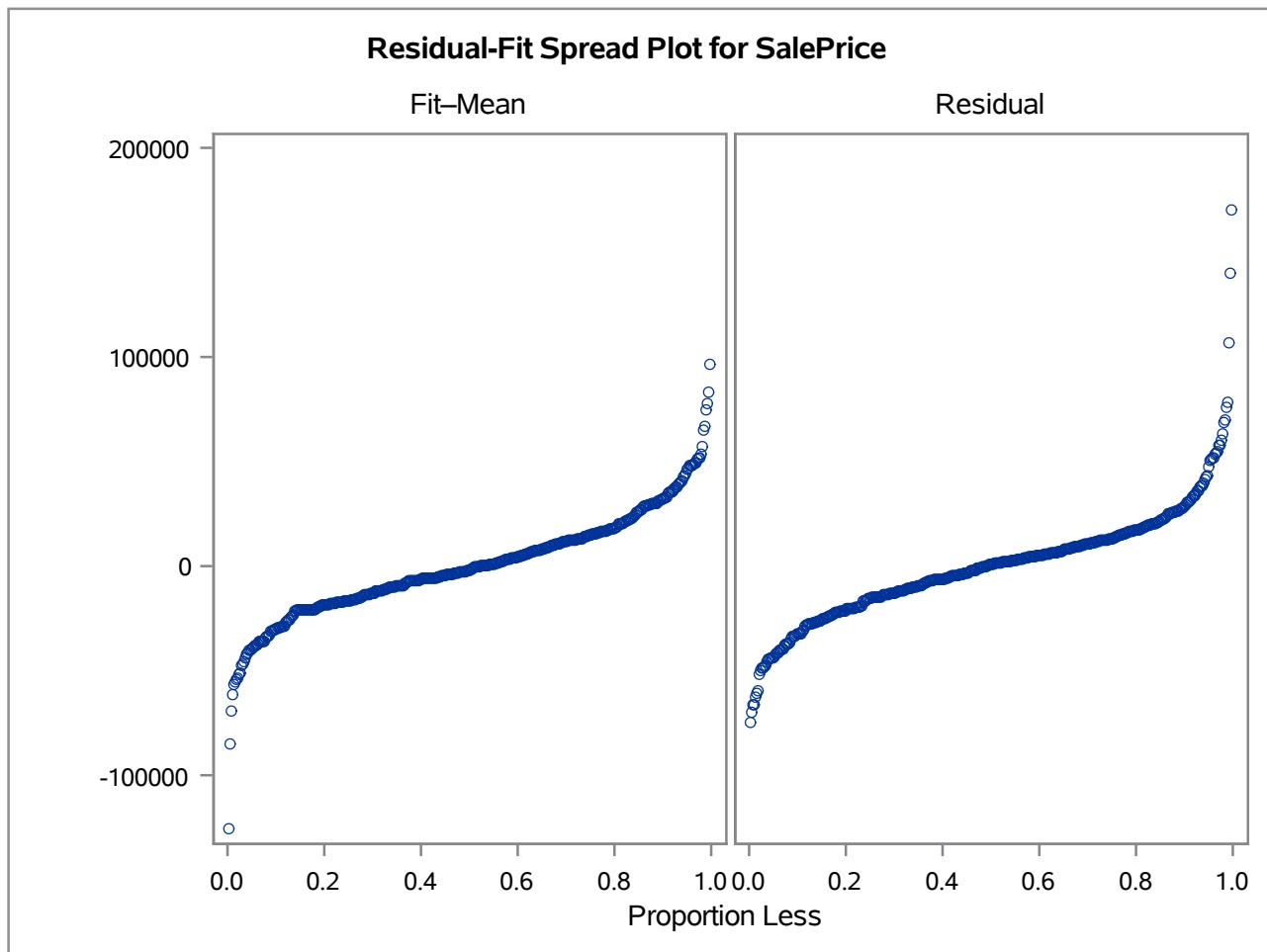
**Linear-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



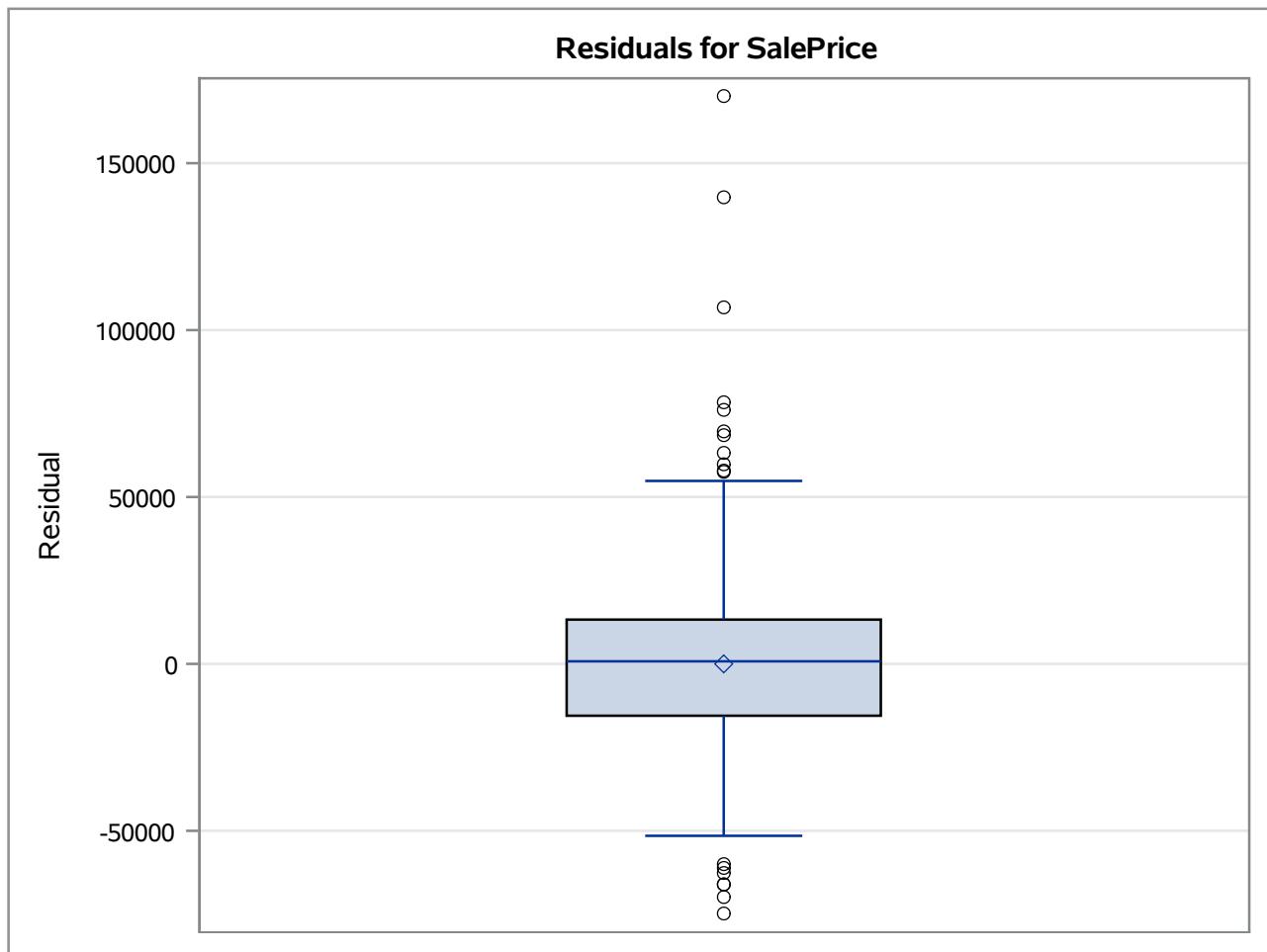
**Linear-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



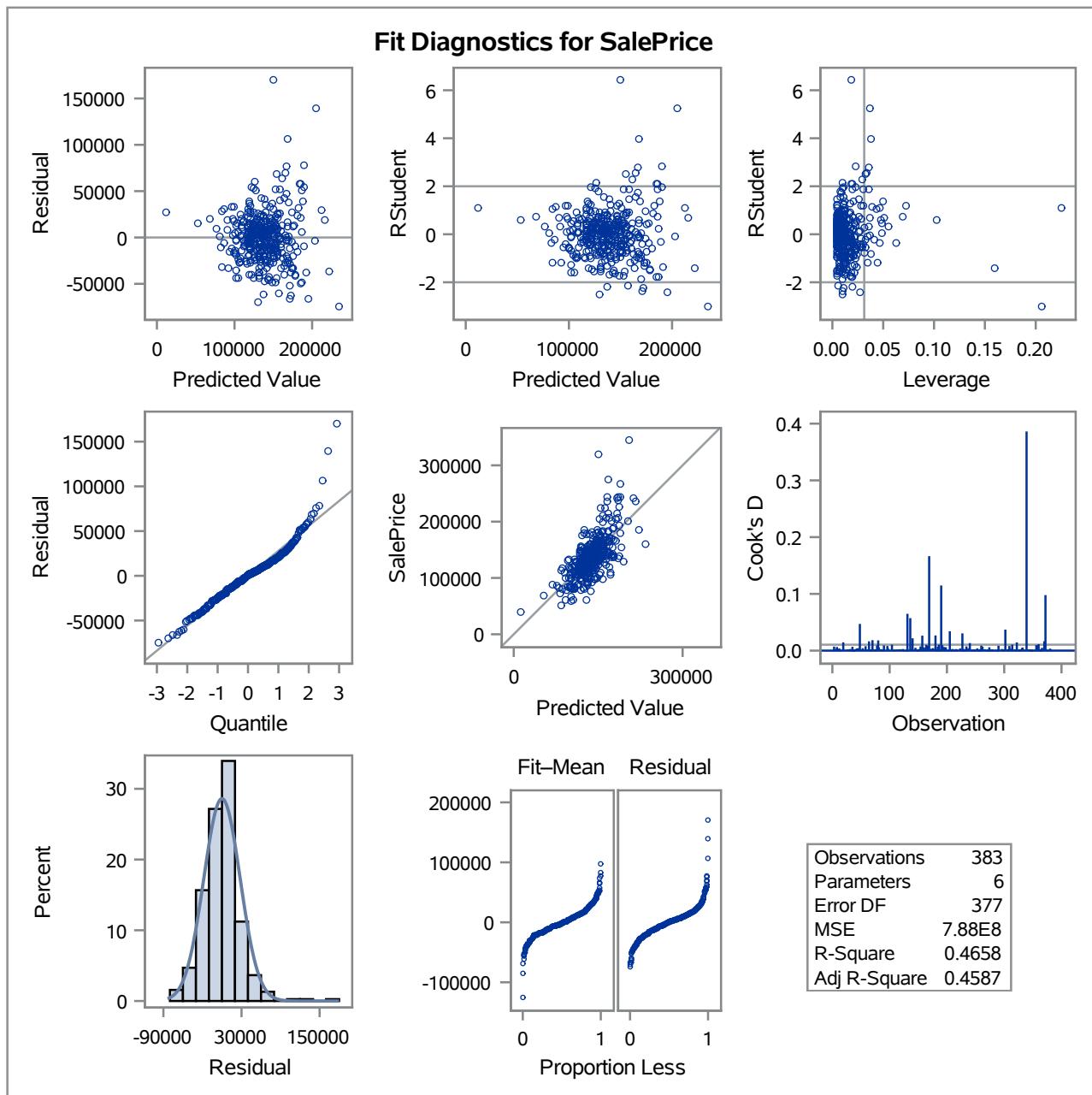
**Linear-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



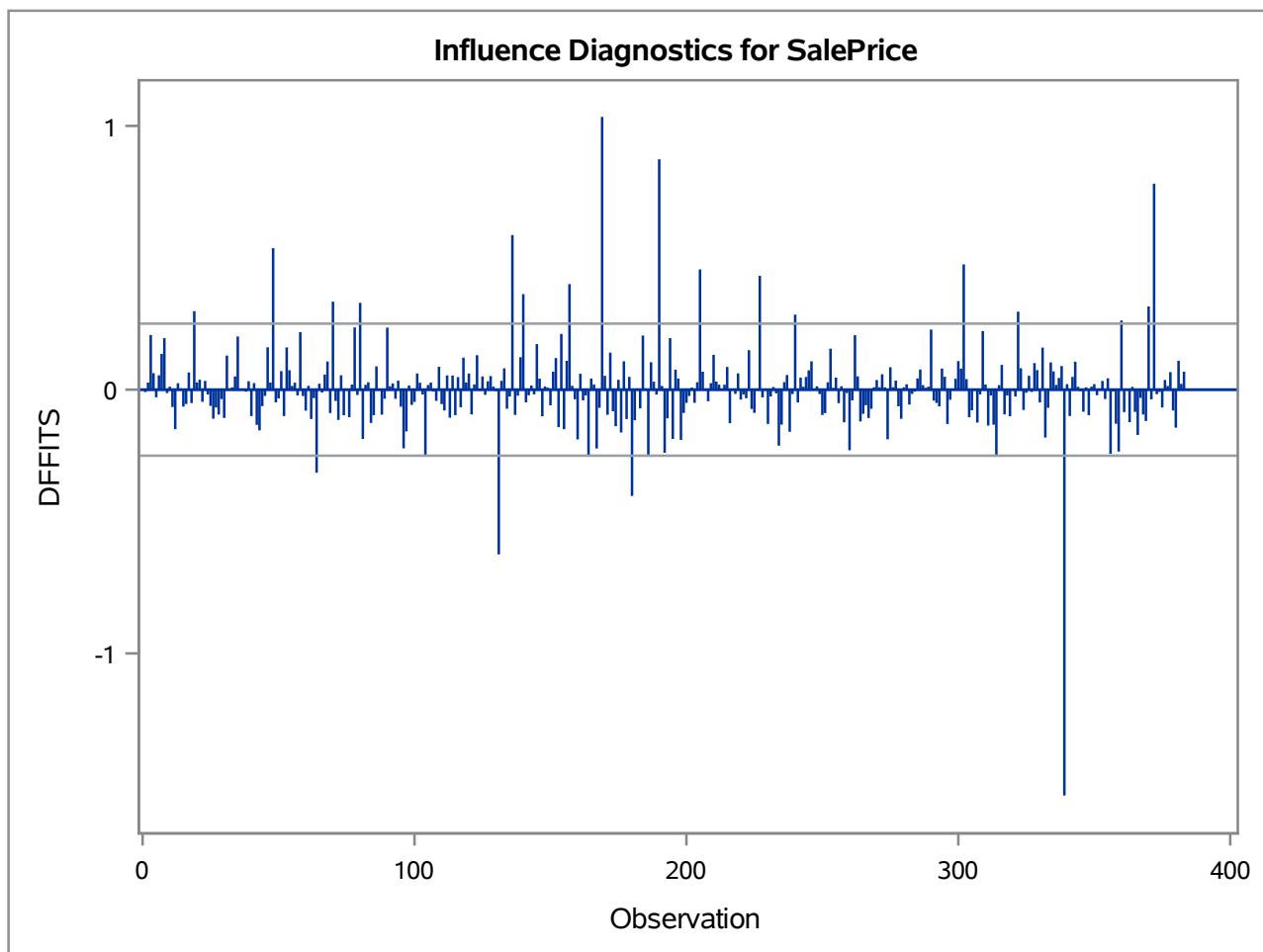
## Linear-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**



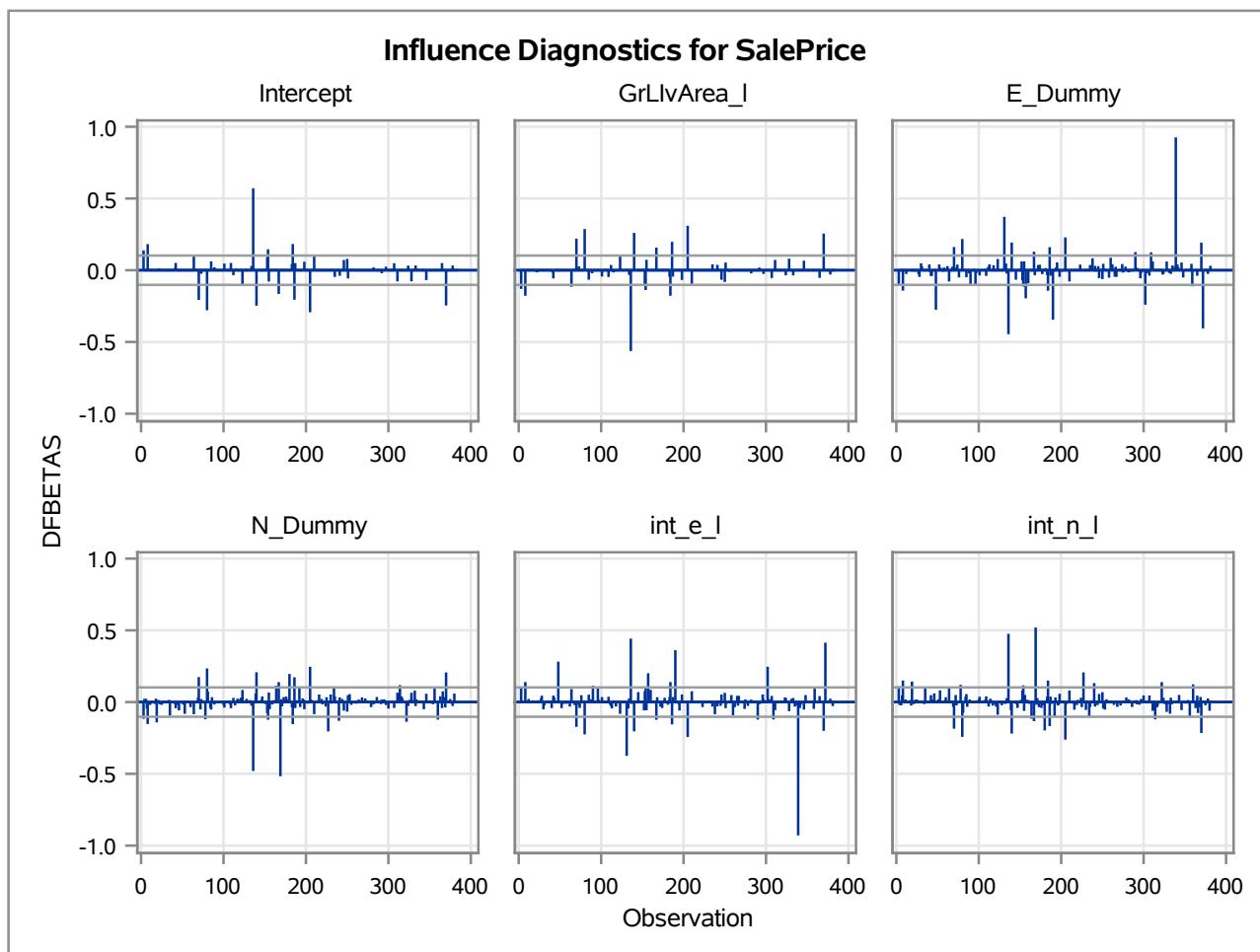
**Linear-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



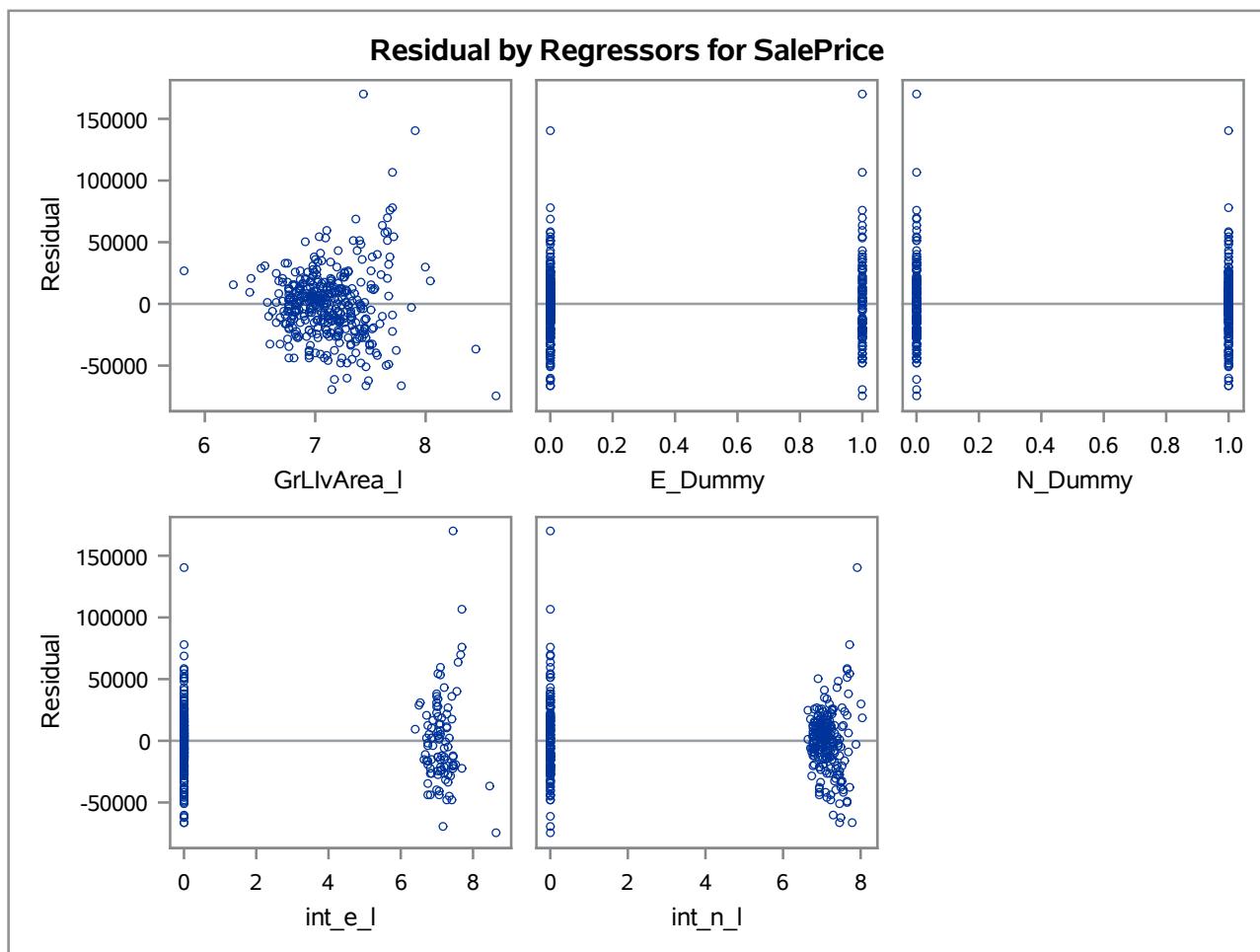
**Linear-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



## Linear-Log MLR with Dummy and Interactions

The REG Procedure  
Model: MODEL1



## Log-Log MLR with Dummy and Interactions

### The REG Procedure

Model: MODEL1

Dependent Variable: SalePrice\_I

Number of Observations Read	383
Number of Observations Used	383

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	14.62858	2.92572	79.14	<.0001
Error	377	13.93775	0.03697		
Corrected Total	382	28.56633			

Root MSE	0.19228	R-Square	0.5121
Dependent Mean	11.79887	Adj R-Sq	0.5056
Coeff Var	1.62962		

Parameter Estimates								
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr >  t	Variance Inflation	95% Confidence Limits	
Intercept	1	5.91292	0.50459	11.72	<.0001	0	4.92076	6.90508
GrLlvArea_I	1	0.81965	0.07163	11.44	<.0001	5.16110	0.67881	0.96049
E_Dummy	1	2.09359	0.64589	3.24	0.0013	833.79515	0.82358	3.36359
N_Dummy	1	2.57981	0.59988	4.30	<.0001	903.48340	1.40027	3.75934
int_e_I	1	-0.29998	0.09122	-3.29	0.0011	848.24992	-0.47934	-0.12063
int_n_I	1	-0.34662	0.08482	-4.09	<.0001	923.19487	-0.51340	-0.17984

## Log-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

<b>Output Statistics</b>										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
1	10	11.7	11.6356	0.0255	11.5854	11.6859	0.0428	0.191	0.225	0.000
2	15	12.0	11.8669	0.0128	11.8417	11.8922	0.0971	0.192	0.506	0.000
3	16	11.8	11.4455	0.0325	11.3816	11.5094	0.3451	0.190	1.821	0.016
4	17	11.9	11.7621	0.0164	11.7300	11.7943	0.1496	0.192	0.781	0.001
5	20	11.8	11.8983	0.0131	11.8725	11.9242	-0.0561	0.192	-0.293	0.000
6	27	11.8	11.7104	0.0198	11.6714	11.7494	0.1011	0.191	0.529	0.001
7	29	12.2	11.9826	0.0169	11.9494	12.0158	0.2603	0.192	1.359	0.002
8	30	11.1	11.0389	0.0614	10.9181	11.1597	0.0957	0.182	0.525	0.005
9	34	12.0	12.0113	0.0188	11.9743	12.0482	0.005468	0.191	0.029	0.000
10	38	11.9	11.8833	0.0129	11.8579	11.9086	0.0549	0.192	0.286	0.000
11	39	11.6	11.7865	0.0150	11.7569	11.8160	-0.1874	0.192	-0.978	0.001
12	40	11.3	11.6698	0.0198	11.6309	11.7087	-0.3553	0.191	-1.858	0.006
13	41	12.0	11.8930	0.0130	11.8674	11.9187	0.0899	0.192	0.469	0.000
14	45	11.9	11.8264	0.0134	11.8000	11.8528	0.0301	0.192	0.157	0.000
15	52	11.6	11.7077	0.0254	11.6579	11.7576	-0.0594	0.191	-0.312	0.000
16	55	11.8	11.9057	0.0133	11.8795	11.9319	-0.1304	0.192	-0.680	0.000
17	56	12.1	11.9278	0.0140	11.9002	11.9554	0.1757	0.192	0.916	0.001
18	67	12.1	12.1347	0.0286	12.0784	12.1910	-0.0340	0.190	-0.179	0.000
19	71	12.4	12.1381	0.0289	12.0812	12.1950	0.2668	0.190	1.403	0.008
20	74	11.9	11.7993	0.0144	11.7709	11.8276	0.0845	0.192	0.441	0.000
21	77	11.8	11.7370	0.0180	11.7017	11.7723	0.0816	0.191	0.426	0.000
22	78	11.8	11.7804	0.0267	11.7278	11.8330	-0.0284	0.190	-0.149	0.000
23	81	12.2	12.1206	0.0274	12.0666	12.1745	0.0525	0.190	0.276	0.000
24	84	11.7	11.7900	0.0148	11.7609	11.8192	-0.0420	0.192	-0.219	0.000
25	91	11.6	11.7788	0.0154	11.7485	11.8091	-0.1715	0.192	-0.895	0.001
26	92	11.5	11.8601	0.0128	11.8349	11.8853	-0.3613	0.192	-1.883	0.003
27	98	11.5	11.5750	0.0243	11.5272	11.6229	-0.1160	0.191	-0.608	0.001
28	99	11.3	11.5025	0.0298	11.4439	11.5612	-0.1759	0.190	-0.926	0.004
29	100	11.8	11.8563	0.0129	11.8310	11.8816	-0.0891	0.192	-0.464	0.000
30	111	11.8	11.9173	0.0294	11.8595	11.9752	-0.0903	0.190	-0.475	0.001
31	118	12.0	11.6574	0.0201	11.6179	11.6970	0.2937	0.191	1.536	0.004
32	123	11.8	11.7967	0.0145	11.7681	11.8252	0.0237	0.192	0.124	0.000

## Log-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

<b>Output Statistics</b>										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
33	129	12.0	11.9015	0.0132	11.8755	11.9275	0.0497	0.192	0.259	0.000
34	130	11.9	11.7847	0.0151	11.7550	11.8144	0.1337	0.192	0.698	0.001
35	131	12.3	12.1239	0.0277	12.0694	12.1784	0.2044	0.190	1.074	0.004
36	133	11.9	11.8941	0.0131	11.8684	11.9198	0.0293	0.192	0.153	0.000
37	137	11.9	11.8520	0.0129	11.8266	11.8774	0.0186	0.192	0.097	0.000
38	141	11.7	11.6911	0.0213	11.6493	11.7330	-0.0384	0.191	-0.201	0.000
39	143	12.0	11.9143	0.0136	11.8876	11.9410	0.1054	0.192	0.550	0.000
40	146	11.8	11.8747	0.0261	11.8234	11.9261	-0.0994	0.190	-0.522	0.001
41	147	11.6	11.4654	0.0314	11.4036	11.5272	0.0963	0.190	0.508	0.001
42	150	11.7	11.8172	0.0280	11.7622	11.8722	-0.1645	0.190	-0.865	0.003
43	156	11.3	11.6439	0.0206	11.6033	11.6844	-0.3667	0.191	-1.918	0.007
44	157	11.6	11.7788	0.0154	11.7485	11.8091	-0.1751	0.192	-0.914	0.001
45	166	11.8	11.7541	0.0198	11.7153	11.7930	0.001755	0.191	0.009	0.000
46	172	12.3	11.9989	0.0179	11.9636	12.0341	0.2795	0.191	1.460	0.003
47	174	12.0	11.9064	0.0133	11.8802	11.9326	0.0951	0.192	0.496	0.000
48	176	12.4	11.9960	0.0363	11.9245	12.0674	0.4049	0.189	2.144	0.028
49	183	11.7	11.7483	0.0196	11.7097	11.7869	-0.0531	0.191	-0.278	0.000
50	185	11.8	11.7591	0.0262	11.7076	11.8105	-0.007116	0.190	-0.037	0.000
51	192	12.1	11.9454	0.0148	11.9163	11.9745	0.1773	0.192	0.925	0.001
52	194	11.8	11.8747	0.0261	11.8234	11.9261	-0.0994	0.190	-0.522	0.001
53	198	12.4	12.2973	0.0432	12.2124	12.3821	0.0701	0.187	0.374	0.001
54	201	11.8	11.6556	0.0202	11.6159	11.6953	0.1938	0.191	1.014	0.002
55	208	11.9	11.8053	0.0142	11.7775	11.8332	0.0512	0.192	0.267	0.000
56	210	11.9	11.8019	0.0143	11.7738	11.8300	0.0826	0.192	0.431	0.000
57	211	11.5	11.5203	0.0284	11.4645	11.5761	-0.0276	0.190	-0.145	0.000
58	212	12.1	11.6962	0.0193	11.6582	11.7341	0.4373	0.191	2.286	0.009
59	216	11.8	11.8605	0.0128	11.8352	11.8857	-0.0515	0.192	-0.269	0.000
60	224	11.5	11.6911	0.0213	11.6493	11.7330	-0.2086	0.191	-1.092	0.002
61	231	11.9	11.8441	0.0130	11.8185	11.8697	0.0608	0.192	0.317	0.000
62	240	11.6	11.8024	0.0216	11.7600	11.8449	-0.1673	0.191	-0.876	0.002
63	248	11.8	11.9109	0.0135	11.8844	11.9374	-0.0615	0.192	-0.321	0.000
64	251	11.2	11.7937	0.0271	11.7403	11.8470	-0.5486	0.190	-2.882	0.028

## Log-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

<b>Output Statistics</b>										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
65	254	12.0	11.8851	0.0129	11.8597	11.9105	0.0853	0.192	0.444	0.000
66	255	11.9	11.8894	0.0130	11.8639	11.9150	-0.004941	0.192	-0.026	0.000
67	261	12.1	11.9133	0.0135	11.8867	11.9399	0.1649	0.192	0.860	0.001
68	270	11.9	11.6519	0.0203	11.6119	11.6918	0.2531	0.191	1.324	0.003
69	274	11.8	11.9919	0.0175	11.9576	12.0263	-0.1497	0.191	-0.782	0.001
70	276	12.2	11.9330	0.0336	11.8670	11.9990	0.2978	0.189	1.573	0.013
71	287	12.0	12.0206	0.0195	11.9823	12.0589	-0.0440	0.191	-0.230	0.000
72	288	11.4	11.6878	0.0215	11.6455	11.7302	-0.3027	0.191	-1.584	0.005
73	290	11.9	11.8483	0.0292	11.7908	11.9058	0.0937	0.190	0.493	0.001
74	293	11.8	11.8769	0.0263	11.8252	11.9285	-0.0939	0.190	-0.493	0.001
75	295	12.0	11.9954	0.0177	11.9606	12.0303	0.0303	0.191	0.158	0.000
76	309	11.3	11.5185	0.0285	11.4624	11.5745	-0.1979	0.190	-1.041	0.004
77	312	11.8	11.7468	0.0173	11.7128	11.7809	0.0437	0.191	0.228	0.000
78	325	12.4	12.2764	0.0413	12.1953	12.3576	0.1202	0.188	0.640	0.003
79	328	11.9	11.9136	0.0135	11.8870	11.9403	-0.0274	0.192	-0.143	0.000
80	329	12.3	12.1961	0.0517	12.0945	12.2978	0.0799	0.185	0.432	0.002
81	331	11.7	12.0190	0.0194	11.9809	12.0570	-0.3321	0.191	-1.736	0.005
82	332	11.8	11.7860	0.0150	11.7565	11.8156	0.0562	0.192	0.293	0.000
83	340	12.0	11.8524	0.0129	11.8270	11.8778	0.0988	0.192	0.515	0.000
84	343	11.4	11.7788	0.0154	11.7485	11.8091	-0.3994	0.192	-2.084	0.005
85	346	11.9	11.9482	0.0345	11.8804	12.0160	-0.0974	0.189	-0.515	0.001
86	347	11.9	11.7400	0.0178	11.7050	11.7749	0.1884	0.191	0.984	0.001
87	348	12.0	11.9451	0.0148	11.9160	11.9742	0.0221	0.192	0.115	0.000
88	353	11.5	11.6509	0.0204	11.6109	11.6910	-0.1893	0.191	-0.990	0.002
89	362	11.9	11.9099	0.0323	11.8464	11.9734	-0.0254	0.190	-0.134	0.000
90	363	12.2	11.9358	0.0310	11.8749	11.9967	0.2628	0.190	1.385	0.009
91	367	12.0	11.9174	0.0137	11.8905	11.9443	0.0593	0.192	0.309	0.000
92	368	12.0	11.9298	0.0141	11.9020	11.9575	0.0839	0.192	0.438	0.000
93	369	11.8	11.8726	0.0128	11.8474	11.8978	-0.0820	0.192	-0.428	0.000
94	370	12.0	11.8796	0.0129	11.8543	11.9049	0.1157	0.192	0.603	0.000
95	374	11.7	11.8912	0.0130	11.8656	11.9168	-0.1713	0.192	-0.893	0.001
96	376	11.0	11.5438	0.0266	11.4916	11.5960	-0.5252	0.190	-2.758	0.025

**Log-Log MLR with Dummy and Interactions**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
97	387	11.3	11.6840	0.0195	11.6457	11.7223	-0.3818	0.191	-1.996	0.007
98	388	11.7	11.6574	0.0201	11.6179	11.6970	0.0786	0.191	0.411	0.000
99	391	11.7	11.7587	0.0199	11.7196	11.7978	-0.0718	0.191	-0.376	0.000
100	393	11.6	11.7009	0.0205	11.6605	11.7413	-0.1250	0.191	-0.654	0.001
101	394	11.5	11.3796	0.0364	11.3080	11.4511	0.1334	0.189	0.706	0.003
102	396	11.8	11.6662	0.0199	11.6271	11.7052	0.1014	0.191	0.530	0.001
103	398	12.0	12.0414	0.0210	12.0001	12.0828	-0.000831	0.191	-0.004	0.000
104	411	11.0	11.7229	0.0193	11.6850	11.7608	-0.7208	0.191	-3.768	0.024
105	419	11.7	11.6616	0.0200	11.6223	11.7009	0.0824	0.191	0.431	0.000
106	420	11.9	11.7860	0.0150	11.7565	11.8156	0.0775	0.192	0.405	0.000
107	425	11.8	11.8449	0.0130	11.8193	11.8705	-0.002693	0.192	-0.014	0.000
108	428	11.6	11.7141	0.0196	11.6756	11.7526	-0.1149	0.191	-0.601	0.001
109	438	11.7	11.4921	0.0301	11.4329	11.5513	0.1948	0.190	1.026	0.004
110	440	11.6	11.6893	0.0194	11.6511	11.7274	-0.0810	0.191	-0.424	0.000
111	442	11.7	11.7857	0.0208	11.7448	11.8267	-0.1073	0.191	-0.561	0.001
112	443	12.0	11.9461	0.0343	11.8786	12.0137	0.0548	0.189	0.289	0.000
113	446	11.8	11.8686	0.0257	11.8182	11.9191	-0.1127	0.191	-0.592	0.001
114	447	12.2	12.0609	0.0225	12.0166	12.1052	0.0939	0.191	0.492	0.001
115	460	11.6	11.7263	0.0256	11.6761	11.7766	-0.1181	0.191	-0.620	0.001
116	467	12.0	11.8759	0.0128	11.8507	11.9012	0.1498	0.192	0.781	0.000
117	468	11.9	11.9954	0.0177	11.9606	12.0303	-0.1006	0.191	-0.526	0.000
118	473	11.9	11.6324	0.0211	11.5909	11.6739	0.2726	0.191	1.426	0.004
119	486	11.9	11.8109	0.0139	11.7835	11.8383	0.0873	0.192	0.455	0.000
120	487	12.0	11.7936	0.0147	11.7647	11.8224	0.1640	0.192	0.856	0.001
121	492	11.8	11.9760	0.0165	11.9436	12.0085	-0.1779	0.192	-0.929	0.001
122	494	12.0	11.8729	0.0128	11.8477	11.8982	0.0782	0.192	0.408	0.000
123	498	12.1	12.0657	0.0421	11.9828	12.1485	0.0570	0.188	0.304	0.001
124	500	11.7	11.7167	0.0194	11.6786	11.7548	-0.0214	0.191	-0.112	0.000
125	503	11.8	11.6970	0.0193	11.6591	11.7350	0.1524	0.191	0.797	0.001
126	510	11.7	11.7793	0.0154	11.7490	11.8095	-0.0472	0.192	-0.246	0.000
127	511	12.0	11.9067	0.0133	11.8805	11.9330	0.1063	0.192	0.554	0.000
128	513	11.8	11.6911	0.0213	11.6493	11.7330	0.0834	0.191	0.436	0.000

## Log-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

<b>Output Statistics</b>										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
129	522	11.9	11.8635	0.0128	11.8383	11.8888	0.0549	0.192	0.286	0.000
130	523	12.0	11.9922	0.0372	11.9191	12.0654	-0.0156	0.189	-0.083	0.000
131	524	12.1	12.3978	0.0769	12.2465	12.5491	-0.2710	0.176	-1.538	0.075
132	527	11.8	11.7249	0.0188	11.6880	11.7619	0.0656	0.191	0.343	0.000
133	529	11.4	11.3351	0.0453	11.2461	11.4241	0.0270	0.187	0.145	0.000
134	532	11.8	11.8281	0.0284	11.7723	11.8839	-0.0683	0.190	-0.359	0.000
135	533	11.6	11.6704	0.0229	11.6254	11.7154	-0.0852	0.191	-0.446	0.000
136	534	10.6	10.6760	0.0913	10.4965	10.8555	-0.0970	0.169	-0.573	0.016
137	536	11.6	11.7510	0.0197	11.7123	11.7897	-0.1658	0.191	-0.867	0.001
138	538	11.6	11.6911	0.0213	11.6493	11.7330	-0.0716	0.191	-0.375	0.000
139	544	11.8	11.6348	0.0258	11.5840	11.6855	0.1633	0.191	0.857	0.002
140	547	12.3	11.9778	0.0363	11.9065	12.0492	0.2770	0.189	1.467	0.013
141	554	11.6	11.6579	0.0201	11.6184	11.6975	-0.0680	0.191	-0.356	0.000
142	556	11.6	11.6133	0.0259	11.5623	11.6642	0.0219	0.191	0.115	0.000
143	557	11.9	11.8019	0.0143	11.7738	11.8300	0.0546	0.192	0.285	0.000
144	563	11.6	11.5942	0.0231	11.5487	11.6396	-0.004272	0.191	-0.022	0.000
145	564	12.1	11.8640	0.0253	11.8142	11.9138	0.2641	0.191	1.386	0.006
146	570	11.8	11.7325	0.0183	11.6966	11.7684	0.0876	0.191	0.458	0.000
147	571	11.9	12.0190	0.0194	11.9809	12.0570	-0.1512	0.191	-0.790	0.001
148	572	11.7	11.6911	0.0213	11.6493	11.7330	0.004136	0.191	0.022	0.000
149	575	11.8	11.8092	0.0140	11.7817	11.8367	0.0330	0.192	0.172	0.000
150	576	11.7	11.8528	0.0129	11.8274	11.8781	-0.1701	0.192	-0.887	0.001
151	581	12.1	11.9291	0.0141	11.9014	11.9568	0.1821	0.192	0.950	0.001
152	583	11.7	11.4906	0.0308	11.4300	11.5512	0.1921	0.190	1.012	0.005
153	585	11.8	11.9461	0.0343	11.8786	12.0137	-0.1480	0.189	-0.782	0.003
154	587	11.8	11.4300	0.0334	11.3644	11.4956	0.3453	0.189	1.824	0.017
155	590	11.3	11.5198	0.0289	11.4630	11.5765	-0.2362	0.190	-1.243	0.006
156	606	12.2	12.0848	0.0244	12.0367	12.1329	0.1460	0.191	0.765	0.002
157	608	12.3	11.9585	0.0329	11.8937	12.0233	0.3653	0.189	1.929	0.019
158	616	11.8	11.7851	0.0151	11.7555	11.8148	0.0462	0.192	0.241	0.000
159	618	11.6	11.6733	0.0227	11.6287	11.7178	-0.1068	0.191	-0.559	0.001
160	621	11.1	11.5203	0.0284	11.4645	11.5761	-0.4078	0.190	-2.145	0.017

## Log-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

<b>Output Statistics</b>										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
161	626	12.0	11.8122	0.0139	11.7848	11.8395	0.1708	0.192	0.890	0.001
162	627	11.8	11.9268	0.0140	11.8993	11.9543	-0.0781	0.192	-0.407	0.000
163	628	11.9	11.9583	0.0155	11.9279	11.9887	-0.0201	0.192	-0.105	0.000
164	629	11.8	12.1067	0.0263	12.0551	12.1583	-0.2937	0.190	-1.542	0.008
165	630	12.0	11.9022	0.0132	11.8762	11.9282	0.1325	0.192	0.691	0.000
166	634	11.8	11.7860	0.0150	11.7565	11.8156	0.0591	0.192	0.308	0.000
167	637	11.0	11.3919	0.0356	11.3219	11.4620	-0.3898	0.189	-2.063	0.025
168	639	11.4	11.4777	0.0319	11.4149	11.5405	-0.1273	0.190	-0.671	0.002
169	643	12.8	12.2308	0.0371	12.1578	12.3038	0.5205	0.189	2.759	0.049
170	646	11.9	11.7512	0.0170	11.7177	11.7847	0.1212	0.192	0.633	0.001
171	647	11.5	11.7824	0.0152	11.7525	11.8124	-0.2867	0.192	-1.496	0.002
172	648	12.0	11.6429	0.0207	11.6023	11.6835	0.3083	0.191	1.613	0.005
173	649	12.0	12.0484	0.0216	12.0061	12.0908	-0.0973	0.191	-0.509	0.001
174	652	11.6	11.8104	0.0220	11.7672	11.8536	-0.2205	0.191	-1.154	0.003
175	657	11.9	11.7847	0.0151	11.7550	11.8144	0.1032	0.192	0.539	0.000
176	659	11.5	11.9386	0.0145	11.9101	11.9671	-0.4510	0.192	-2.352	0.005
177	660	12.0	11.8021	0.0216	11.7597	11.8445	0.2237	0.191	1.171	0.003
178	663	11.6	11.9167	0.0136	11.8899	11.9435	-0.3085	0.192	-1.608	0.002
179	664	11.8	11.6827	0.0195	11.6444	11.7210	0.1487	0.191	0.777	0.001
180	667	11.8	12.1704	0.0317	12.1080	12.2328	-0.4029	0.190	-2.124	0.021
181	672	11.5	11.7595	0.0199	11.7203	11.7986	-0.2112	0.191	-1.104	0.002
182	675	11.8	11.8206	0.0136	11.7938	11.8473	0.0288	0.192	0.150	0.000
183	695	11.9	11.9282	0.0333	11.8627	11.9937	-0.0682	0.189	-0.360	0.001
184	697	11.4	11.1777	0.0506	11.0782	11.2772	0.2187	0.185	1.179	0.017
185	698	11.7	11.6680	0.0198	11.6290	11.7069	0.0560	0.191	0.293	0.000
186	711	10.9	11.3158	0.0406	11.2359	11.3956	-0.4568	0.188	-2.430	0.046
187	714	11.8	11.5414	0.0280	11.4863	11.5964	0.2262	0.190	1.189	0.005
188	723	11.7	11.6911	0.0213	11.6493	11.7330	0.0409	0.191	0.214	0.000
189	724	11.8	11.7964	0.0213	11.7546	11.8383	0.0166	0.191	0.087	0.000
190	725	12.7	11.8714	0.0259	11.8205	11.9222	0.8047	0.191	4.223	0.055
191	726	11.7	11.6911	0.0213	11.6493	11.7330	0.008294	0.191	0.043	0.000
192	729	11.6	12.0319	0.0203	11.9920	12.0719	-0.4237	0.191	-2.216	0.009

## Log-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

<b>Output Statistics</b>										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
193	737	11.4	11.7788	0.0154	11.7485	11.8091	-0.3331	0.192	-1.738	0.003
194	739	12.1	11.6910	0.0194	11.6529	11.7291	0.4042	0.191	2.113	0.008
195	750	11.5	11.8169	0.0223	11.7730	11.8608	-0.3242	0.191	-1.697	0.007
196	755	12.0	11.7724	0.0158	11.7414	11.8034	0.1852	0.192	0.967	0.001
197	761	11.8	11.6911	0.0213	11.6493	11.7330	0.0648	0.191	0.339	0.000
198	762	11.5	11.7905	0.0270	11.7374	11.8437	-0.2776	0.190	-1.458	0.007
199	772	11.5	11.6996	0.0193	11.6617	11.7375	-0.1668	0.191	-0.872	0.001
200	773	11.6	11.6537	0.0203	11.6139	11.6936	-0.0732	0.191	-0.383	0.000
201	774	11.6	11.7167	0.0194	11.6786	11.7548	-0.0684	0.191	-0.357	0.000
202	798	11.6	11.6385	0.0255	11.5883	11.6886	-0.0302	0.191	-0.159	0.000
203	805	11.7	11.8172	0.0137	11.7903	11.8442	-0.1388	0.192	-0.724	0.000
204	807	11.8	11.7507	0.0171	11.7171	11.7843	0.0660	0.192	0.345	0.000
205	808	12.3	11.9477	0.0344	11.8800	12.0154	0.3695	0.189	1.953	0.021
206	809	12.0	11.7993	0.0144	11.7709	11.8276	0.1833	0.192	0.956	0.001
207	814	12.0	11.9334	0.0143	11.9053	11.9615	0.0363	0.192	0.189	0.000
208	815	11.7	11.7122	0.0192	11.6744	11.7500	-0.0509	0.191	-0.266	0.000
209	817	11.8	11.7640	0.0163	11.7321	11.7960	0.0637	0.192	0.333	0.000
210	827	11.6	11.3754	0.0367	11.3033	11.4475	0.2283	0.189	1.209	0.009
211	831	12.0	11.9167	0.0136	11.8899	11.9435	0.1030	0.192	0.537	0.000
212	834	12.0	11.9571	0.0154	11.9268	11.9874	0.0687	0.192	0.358	0.000
213	835	11.8	11.8239	0.0135	11.7973	11.8504	0.0251	0.192	0.131	0.000
214	840	11.8	11.6910	0.0194	11.6529	11.7291	0.0881	0.191	0.461	0.000
215	843	12.1	11.8325	0.0133	11.8064	11.8586	0.2395	0.192	1.248	0.001
216	844	11.9	12.0383	0.0208	11.9974	12.0791	-0.1818	0.191	-0.951	0.002
217	854	12.0	11.9344	0.0143	11.9062	11.9625	0.0360	0.192	0.188	0.000
218	864	11.8	11.8255	0.0135	11.7991	11.8520	-0.0312	0.192	-0.163	0.000
219	866	11.9	11.7612	0.0164	11.7289	11.7935	0.1471	0.192	0.768	0.001
220	871	11.6	11.7073	0.0201	11.6678	11.7467	-0.1036	0.191	-0.542	0.001
221	873	11.7	11.7156	0.0195	11.6774	11.7539	-0.0543	0.191	-0.284	0.000
222	874	11.8	11.8726	0.0128	11.8474	11.8978	-0.0745	0.192	-0.388	0.000
223	881	12.0	11.6410	0.0207	11.6003	11.6818	0.3230	0.191	1.690	0.006
224	885	11.5	11.7062	0.0201	11.6666	11.7458	-0.1933	0.191	-1.011	0.002

## Log-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
225	887	11.9	12.0146	0.0190	11.9772	12.0520	-0.1301	0.191	-0.680	0.001
226	888	11.8	11.7685	0.0202	11.7288	11.8082	0.0482	0.191	0.252	0.000
227	889	12.5	12.1369	0.0288	12.0802	12.1935	0.3619	0.190	1.904	0.014
228	890	11.9	11.9536	0.0152	11.9237	11.9836	-0.0386	0.192	-0.201	0.000
229	891	11.7	11.7229	0.0189	11.6856	11.7601	-0.003743	0.191	-0.020	0.000
230	896	11.8	12.0372	0.0207	11.9965	12.0779	-0.1878	0.191	-0.983	0.002
231	901	11.6	11.6878	0.0215	11.6455	11.7302	-0.0796	0.191	-0.417	0.000
232	902	11.9	11.8865	0.0129	11.8611	11.9120	0.0517	0.192	0.269	0.000
233	906	11.8	11.7892	0.0149	11.7599	11.8184	-0.0294	0.192	-0.153	0.000
234	911	11.9	12.1489	0.0299	12.0902	12.2076	-0.2022	0.190	-1.065	0.005
235	913	11.4	11.5871	0.0265	11.5349	11.6392	-0.2020	0.190	-1.060	0.004
236	918	11.8	11.7034	0.0193	11.6655	11.7413	0.1096	0.191	0.573	0.001
237	920	12.1	11.9241	0.0139	11.8968	11.9515	0.1570	0.192	0.818	0.001
238	922	11.9	12.0060	0.0373	11.9327	12.0792	-0.1153	0.189	-0.611	0.002
239	932	11.7	11.7234	0.0189	11.6862	11.7606	-0.0492	0.191	-0.257	0.000
240	935	12.4	12.1042	0.0261	12.0530	12.1554	0.2925	0.191	1.535	0.007
241	936	11.3	11.3358	0.0393	11.2586	11.4130	-0.0472	0.188	-0.251	0.000
242	943	11.9	11.7857	0.0208	11.7448	11.8267	0.1327	0.191	0.694	0.001
243	947	11.9	11.8239	0.0135	11.7973	11.8504	0.0467	0.192	0.244	0.000
244	951	11.8	11.6911	0.0213	11.6493	11.7330	0.0765	0.191	0.400	0.000
245	955	11.8	11.5857	0.0236	11.5393	11.6322	0.1701	0.191	0.892	0.002
246	961	11.7	11.4493	0.0323	11.3858	11.5128	0.2163	0.190	1.141	0.006
247	968	11.8	11.8045	0.0142	11.7766	11.8324	0.008548	0.192	0.045	0.000
248	970	11.8	11.8032	0.0143	11.7752	11.8312	0.0462	0.192	0.241	0.000
249	971	11.8	11.8433	0.0130	11.8177	11.8690	-0.0303	0.192	-0.158	0.000
250	975	12.0	12.1507	0.0483	12.0558	12.2457	-0.1220	0.186	-0.655	0.005
251	977	11.4	11.4598	0.0317	11.3974	11.5222	-0.1035	0.190	-0.546	0.001
252	979	11.6	11.5380	0.0270	11.4849	11.5911	0.0702	0.190	0.369	0.000
253	981	12.1	11.7598	0.0165	11.7273	11.7922	0.3320	0.192	1.733	0.004
254	986	11.7	11.6752	0.0196	11.6365	11.7138	0.0609	0.191	0.318	0.000
255	993	12.1	12.0515	0.0218	12.0087	12.0944	0.0874	0.191	0.457	0.000
256	996	11.7	11.7445	0.0259	11.6937	11.7954	-0.0360	0.191	-0.189	0.000

## Log-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

<b>Output Statistics</b>										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
257	997	11.8	11.7833	0.0152	11.7535	11.8132	0.0407	0.192	0.213	0.000
258	1001	11.3	11.5663	0.0249	11.5173	11.6153	-0.2518	0.191	-1.321	0.005
259	1007	12.0	11.9991	0.0180	11.9638	12.0345	0.005428	0.191	0.028	0.000
260	1012	11.5	11.8609	0.0251	11.8115	11.9102	-0.3479	0.191	-1.825	0.010
261	1015	11.7	11.7975	0.0145	11.7690	11.8260	-0.1090	0.192	-0.568	0.000
262	1021	12.1	11.6607	0.0200	11.6213	11.7001	0.4176	0.191	2.184	0.009
263	1027	12.0	11.8711	0.0128	11.8459	11.8963	0.1577	0.192	0.822	0.001
264	1029	11.6	11.9112	0.0135	11.8847	11.9377	-0.3495	0.192	-1.822	0.003
265	1036	11.3	11.5087	0.0293	11.4511	11.5664	-0.1701	0.190	-0.895	0.003
266	1046	11.8	11.8820	0.0266	11.8296	11.9344	-0.0354	0.190	-0.186	0.000
267	1050	11.3	11.5585	0.0255	11.5084	11.6086	-0.2093	0.191	-1.098	0.004
268	1053	12.0	12.0827	0.0243	12.0349	12.1304	-0.0690	0.191	-0.362	0.000
269	1054	11.9	11.8159	0.0223	11.7721	11.8597	0.0652	0.191	0.341	0.000
270	1065	11.9	11.8280	0.0134	11.8017	11.8543	0.1167	0.192	0.608	0.000
271	1068	12.0	11.9858	0.0171	11.9522	12.0194	0.0453	0.192	0.237	0.000
272	1070	11.8	11.7067	0.0201	11.6672	11.7463	0.1063	0.191	0.556	0.001
273	1071	11.8	11.7824	0.0152	11.7525	11.8124	0.0306	0.192	0.160	0.000
274	1073	11.4	11.7915	0.0211	11.7501	11.8329	-0.3674	0.191	-1.922	0.007
275	1074	12.0	11.7807	0.0206	11.7401	11.8212	0.1991	0.191	1.042	0.002
276	1078	11.8	11.8036	0.0142	11.7756	11.8316	0.0372	0.192	0.194	0.000
277	1084	12.0	11.8662	0.0128	11.8410	11.8914	0.1167	0.192	0.608	0.000
278	1089	11.8	11.8747	0.0261	11.8234	11.9261	-0.0434	0.190	-0.228	0.000
279	1091	11.4	11.7788	0.0154	11.7485	11.8091	-0.3395	0.192	-1.772	0.003
280	1094	11.9	11.8465	0.0130	11.8210	11.8720	0.0449	0.192	0.234	0.000
281	1095	11.8	11.7290	0.0185	11.6926	11.7654	0.0386	0.191	0.202	0.000
282	1099	11.8	11.8049	0.0275	11.7508	11.8590	-0.0451	0.190	-0.237	0.000
283	1102	11.7	11.7360	0.0180	11.7005	11.7715	-0.0449	0.191	-0.235	0.000
284	1103	11.8	11.8197	0.0136	11.7929	11.8465	-0.006712	0.192	-0.035	0.000
285	1104	12.0	11.8441	0.0130	11.8185	11.8697	0.1357	0.192	0.707	0.000
286	1113	11.8	11.6641	0.0234	11.6180	11.7101	0.1104	0.191	0.579	0.001
287	1114	11.8	11.7640	0.0163	11.7321	11.7960	0.0453	0.192	0.236	0.000
288	1120	11.8	11.7788	0.0154	11.7485	11.8091	0.0245	0.192	0.128	0.000

**Log-Log MLR with Dummy and Interactions**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
289	1123	11.6	11.5750	0.0243	11.5272	11.6229	0.0512	0.191	0.269	0.000
290	1124	11.7	11.4094	0.0381	11.3344	11.4844	0.2690	0.188	1.428	0.014
291	1126	11.7	11.7626	0.0163	11.7305	11.7947	-0.1099	0.192	-0.574	0.000
292	1136	11.5	11.5633	0.0272	11.5098	11.6168	-0.0306	0.190	-0.161	0.000
293	1137	11.7	11.8666	0.0128	11.8414	11.8918	-0.1797	0.192	-0.937	0.001
294	1140	11.9	11.7014	0.0253	11.6516	11.7512	0.1761	0.191	0.924	0.003
295	1141	11.8	11.7370	0.0180	11.7017	11.7723	0.1052	0.191	0.550	0.000
296	1145	11.3	11.5552	0.0257	11.5046	11.6057	-0.2654	0.191	-1.393	0.006
297	1146	11.9	11.9477	0.0344	11.8800	12.0154	-0.0360	0.189	-0.190	0.000
298	1151	11.7	11.7269	0.0187	11.6903	11.7636	0.001089	0.191	0.006	0.000
299	1152	11.9	11.7950	0.0212	11.7533	11.8368	0.1227	0.191	0.642	0.001
300	1155	12.2	12.0435	0.0212	12.0019	12.0852	0.1715	0.191	0.897	0.002
301	1157	12.1	11.8715	0.0128	11.8462	11.8967	0.2287	0.192	1.192	0.001
302	1169	12.4	11.9838	0.0352	11.9145	12.0530	0.3836	0.189	2.029	0.024
303	1172	12.0	11.8700	0.0128	11.8447	11.8952	0.1315	0.192	0.686	0.000
304	1180	11.4	11.6570	0.0201	11.6174	11.6966	-0.2166	0.191	-1.133	0.002
305	1186	11.6	11.7000	0.0193	11.6621	11.7379	-0.1392	0.191	-0.728	0.001
306	1201	11.7	11.6911	0.0213	11.6493	11.7330	-0.0293	0.191	-0.154	0.000
307	1203	11.7	11.8196	0.0281	11.7645	11.8748	-0.1497	0.190	-0.787	0.002
308	1209	11.8	11.8781	0.0129	11.8529	11.9034	-0.0287	0.192	-0.150	0.000
309	1213	11.6	11.3897	0.0400	11.3110	11.4683	0.2455	0.188	1.305	0.013
310	1215	11.8	11.7598	0.0165	11.7273	11.7922	0.0495	0.192	0.259	0.000
311	1219	11.3	11.4993	0.0298	11.4408	11.5579	-0.2033	0.190	-1.070	0.005
312	1221	11.7	11.7167	0.0194	11.6786	11.7548	-0.0640	0.191	-0.335	0.000
313	1223	11.9	12.0502	0.0217	12.0076	12.0929	-0.1796	0.191	-0.940	0.002
314	1224	11.8	12.1193	0.0273	12.0655	12.1730	-0.2850	0.190	-1.497	0.008
315	1226	11.9	11.8214	0.0136	11.7947	11.8481	0.0631	0.192	0.329	0.000
316	1228	11.9	11.7167	0.0194	11.6786	11.7548	0.1815	0.191	0.949	0.002
317	1230	11.8	11.9543	0.0153	11.9243	11.9843	-0.2023	0.192	-1.056	0.001
318	1232	11.8	11.8425	0.0131	11.8169	11.8682	-0.0482	0.192	-0.251	0.000
319	1233	11.5	11.8559	0.0129	11.8306	11.8812	-0.3251	0.192	-1.695	0.002
320	1234	11.9	11.8417	0.0131	11.8161	11.8674	0.0218	0.192	0.114	0.000

## Log-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
321	1250	11.7	11.7545	0.0168	11.7215	11.7876	-0.0677	0.192	-0.353	0.000
322	1251	12.4	12.1135	0.0268	12.0607	12.1662	0.2915	0.190	1.531	0.008
323	1255	12.0	11.8584	0.0249	11.8093	11.9074	0.1578	0.191	0.827	0.002
324	1256	11.8	11.8311	0.0285	11.7750	11.8871	-0.0752	0.190	-0.396	0.001
325	1258	11.5	11.5203	0.0284	11.4645	11.5761	-0.008350	0.190	-0.044	0.000
326	1260	11.9	11.7851	0.0151	11.7555	11.8148	0.1399	0.192	0.730	0.001
327	1262	11.8	11.7833	0.0152	11.7535	11.8132	-0.0165	0.192	-0.086	0.000
328	1264	12.1	12.0675	0.0423	11.9844	12.1506	0.0360	0.188	0.192	0.000
329	1265	12.1	11.8976	0.0131	11.8718	11.9235	0.2086	0.192	1.088	0.001
330	1270	11.9	11.9596	0.0155	11.9290	11.9901	-0.0820	0.192	-0.428	0.000
331	1274	12.1	11.7549	0.0198	11.7160	11.7938	0.3290	0.191	1.720	0.005
332	1276	11.8	12.0688	0.0232	12.0233	12.1144	-0.2411	0.191	-1.263	0.004
333	1286	11.8	11.8576	0.0297	11.7993	11.9159	-0.0633	0.190	-0.333	0.000
334	1291	12.1	11.8272	0.0134	11.8008	11.8536	0.2763	0.192	1.440	0.002
335	1295	11.7	11.5203	0.0284	11.4645	11.5761	0.1324	0.190	0.696	0.002
336	1296	11.8	11.7842	0.0151	11.7545	11.8140	0.0544	0.192	0.284	0.000
337	1297	12.0	11.8172	0.0137	11.7903	11.8442	0.1339	0.192	0.698	0.000
338	1298	11.8	11.6324	0.0211	11.5909	11.6739	0.2170	0.191	1.136	0.003
339	1299	12.0	12.4954	0.0872	12.3238	12.6669	-0.5125	0.171	-2.991	0.387
340	1300	11.9	11.8643	0.0128	11.8391	11.8895	0.0804	0.192	0.419	0.000
341	1305	11.8	11.8744	0.0261	11.8232	11.9257	-0.0991	0.190	-0.520	0.001
342	1315	11.7	11.5685	0.0248	11.5198	11.6172	0.1184	0.191	0.621	0.001
343	1316	12.2	12.1139	0.0269	12.0611	12.1667	0.1261	0.190	0.662	0.001
344	1320	11.6	11.5685	0.0248	11.5198	11.6172	0.0488	0.191	0.256	0.000
345	1321	12.0	11.9451	0.0148	11.9160	11.9742	0.0157	0.192	0.082	0.000
346	1322	11.2	11.3056	0.0413	11.2244	11.3868	-0.1142	0.188	-0.608	0.003
347	1324	11.3	11.2918	0.0423	11.2087	11.3749	0.0287	0.188	0.153	0.000
348	1327	11.3	11.4631	0.0332	11.3978	11.5284	-0.1859	0.189	-0.982	0.005
349	1333	11.5	11.4906	0.0308	11.4300	11.5512	0.0224	0.190	0.118	0.000
350	1341	11.7	11.6955	0.0210	11.6543	11.7367	0.0245	0.191	0.128	0.000
351	1351	12.2	12.2184	0.0360	12.1476	12.2892	-0.0123	0.189	-0.065	0.000
352	1352	12.0	12.0157	0.0191	11.9781	12.0533	0.0337	0.191	0.176	0.000

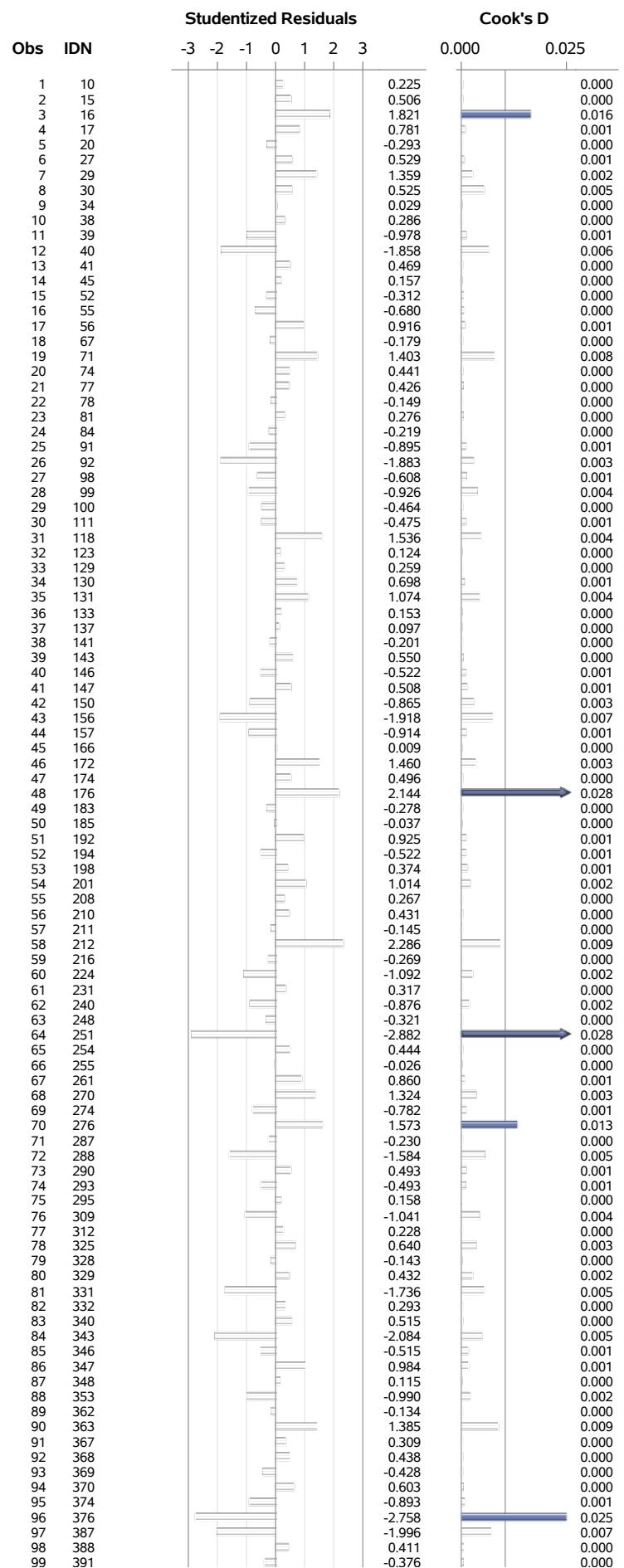
## Log-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

<b>Output Statistics</b>										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
353	1353	11.8	11.7077	0.0254	11.6579	11.7576	0.1046	0.191	0.549	0.001
354	1357	11.6	11.7062	0.0201	11.6666	11.7458	-0.0980	0.191	-0.512	0.000
355	1358	11.9	11.7958	0.0146	11.7671	11.8244	0.1219	0.192	0.636	0.000
356	1363	11.6	12.0217	0.0195	11.9833	12.0602	-0.4610	0.191	-2.410	0.010
357	1372	12.0	12.0003	0.0180	11.9648	12.0358	0.0164	0.191	0.086	0.000
358	1378	11.7	11.8418	0.0238	11.7949	11.8886	-0.1719	0.191	-0.901	0.002
359	1381	11.0	11.5203	0.0284	11.4645	11.5761	-0.5435	0.190	-2.858	0.030
360	1382	12.4	12.1150	0.0270	12.0620	12.1680	0.2629	0.190	1.381	0.006
361	1385	11.6	11.7155	0.0192	11.6777	11.7533	-0.1538	0.191	-0.804	0.001
362	1390	11.8	11.7365	0.0257	11.6859	11.7871	0.0465	0.191	0.244	0.000
363	1392	11.7	11.9778	0.0166	11.9452	12.0105	-0.2498	0.192	-1.304	0.002
364	1393	11.7	11.7104	0.0198	11.6714	11.7494	0.009519	0.191	0.050	0.000
365	1398	11.8	11.9143	0.0325	11.8503	11.9782	-0.0829	0.190	-0.437	0.001
366	1399	11.8	12.0649	0.0228	12.0200	12.1098	-0.2299	0.191	-1.204	0.003
367	1401	11.7	11.6951	0.0253	11.6454	11.7448	0.000160	0.191	0.001	0.000
368	1412	11.8	12.0023	0.0182	11.9665	12.0380	-0.1529	0.191	-0.799	0.001
369	1413	11.4	11.7788	0.0154	11.7485	11.8091	-0.3712	0.192	-1.937	0.004
370	1415	12.2	12.0782	0.0430	11.9936	12.1628	0.1623	0.187	0.866	0.007
371	1419	11.7	11.8239	0.0135	11.7973	11.8504	-0.0959	0.192	-0.500	0.000
372	1424	12.5	12.0062	0.0373	11.9329	12.0795	0.5182	0.189	2.747	0.049
373	1425	11.9	11.9001	0.0132	11.8742	11.9260	-0.0225	0.192	-0.118	0.000
374	1426	11.9	11.8666	0.0128	11.8414	11.8918	-0.002985	0.192	-0.016	0.000
375	1428	11.8	11.9700	0.0161	11.9383	12.0017	-0.1206	0.192	-0.629	0.000
376	1436	12.1	11.9636	0.0158	11.9326	11.9946	0.1032	0.192	0.539	0.000
377	1437	11.7	11.6911	0.0213	11.6493	11.7330	0.008294	0.191	0.043	0.000
378	1444	11.7	11.5345	0.0283	11.4790	11.5901	0.1690	0.190	0.889	0.003
379	1449	11.6	11.7507	0.0197	11.7120	11.7893	-0.1244	0.191	-0.650	0.001
380	1451	11.8	12.0362	0.0206	11.9956	12.0767	-0.2158	0.191	-1.129	0.002
381	1453	11.9	11.6324	0.0211	11.5909	11.6739	0.2521	0.191	1.319	0.004
382	1459	11.9	11.7958	0.0146	11.7671	11.8244	0.0687	0.192	0.358	0.000
383	1460	11.9	11.7147	0.0192	11.6769	11.7525	0.1869	0.191	0.977	0.002

**Log-Log MLR with Dummy and Interactions****The REG Procedure****Model: MODEL1****Dependent Variable: SalePrice\_I**

### Studentized Residuals and Cook's D for SalePrice\_I



## Log-Log MLR with Dummy and Interactions

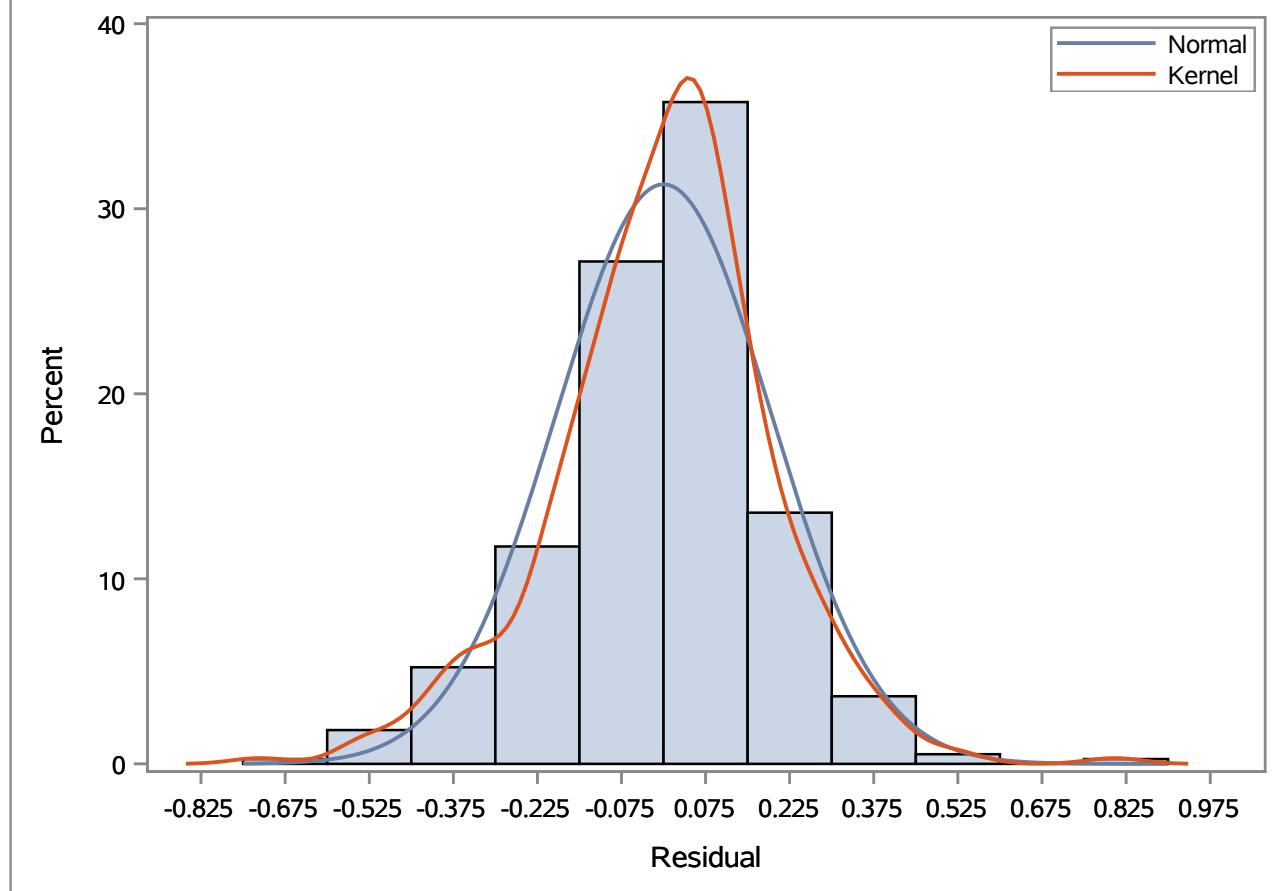
**The REG Procedure**

Model: MODEL1

Dependent Variable: SalePrice\_I

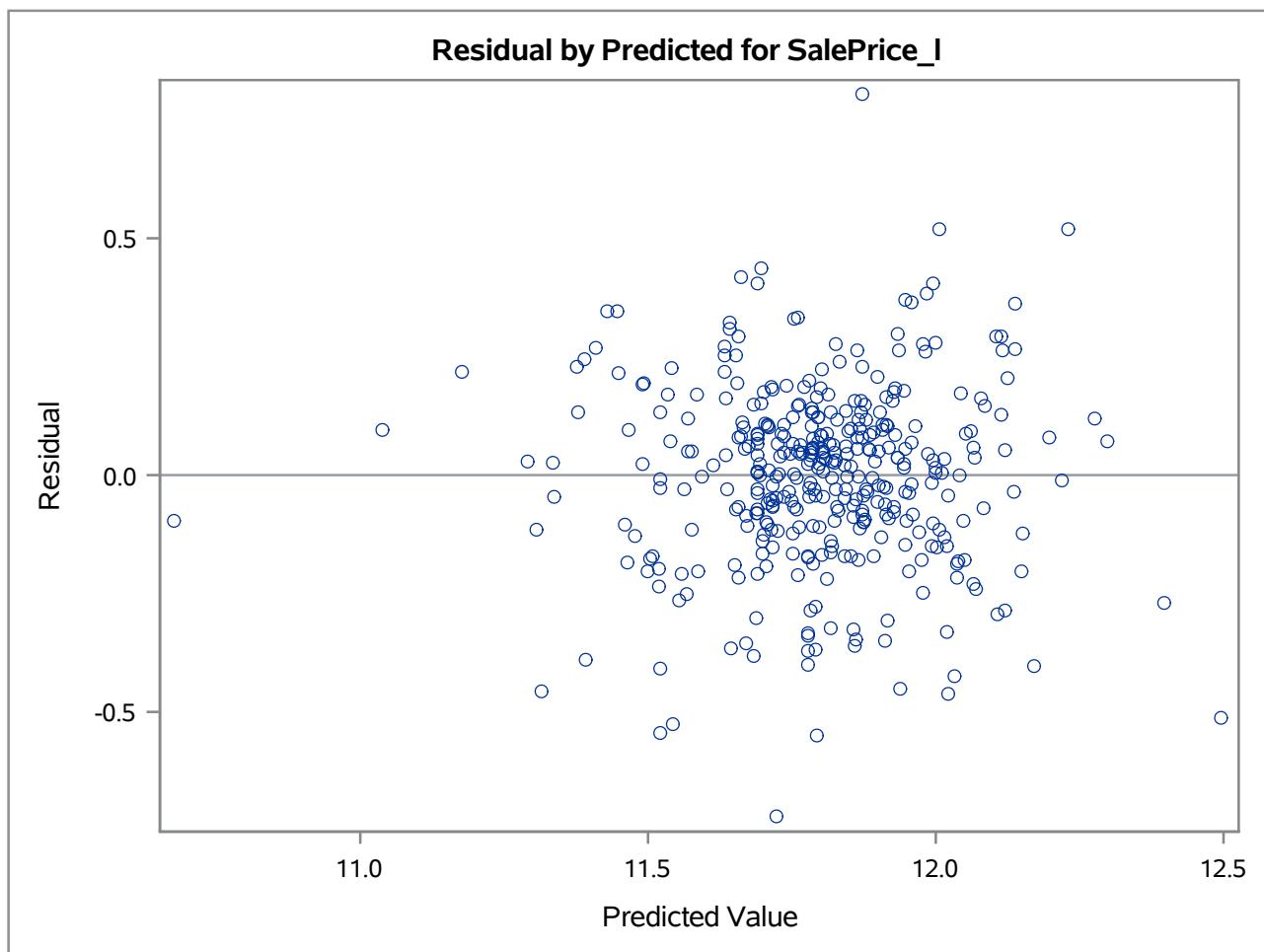
<b>Sum of Residuals</b>	-5.0932E-12
<b>Sum of Squared Residuals</b>	13.93775
<b>Predicted Residual SS (PRESS)</b>	14.60908

**Distribution of Residuals for SalePrice\_I**



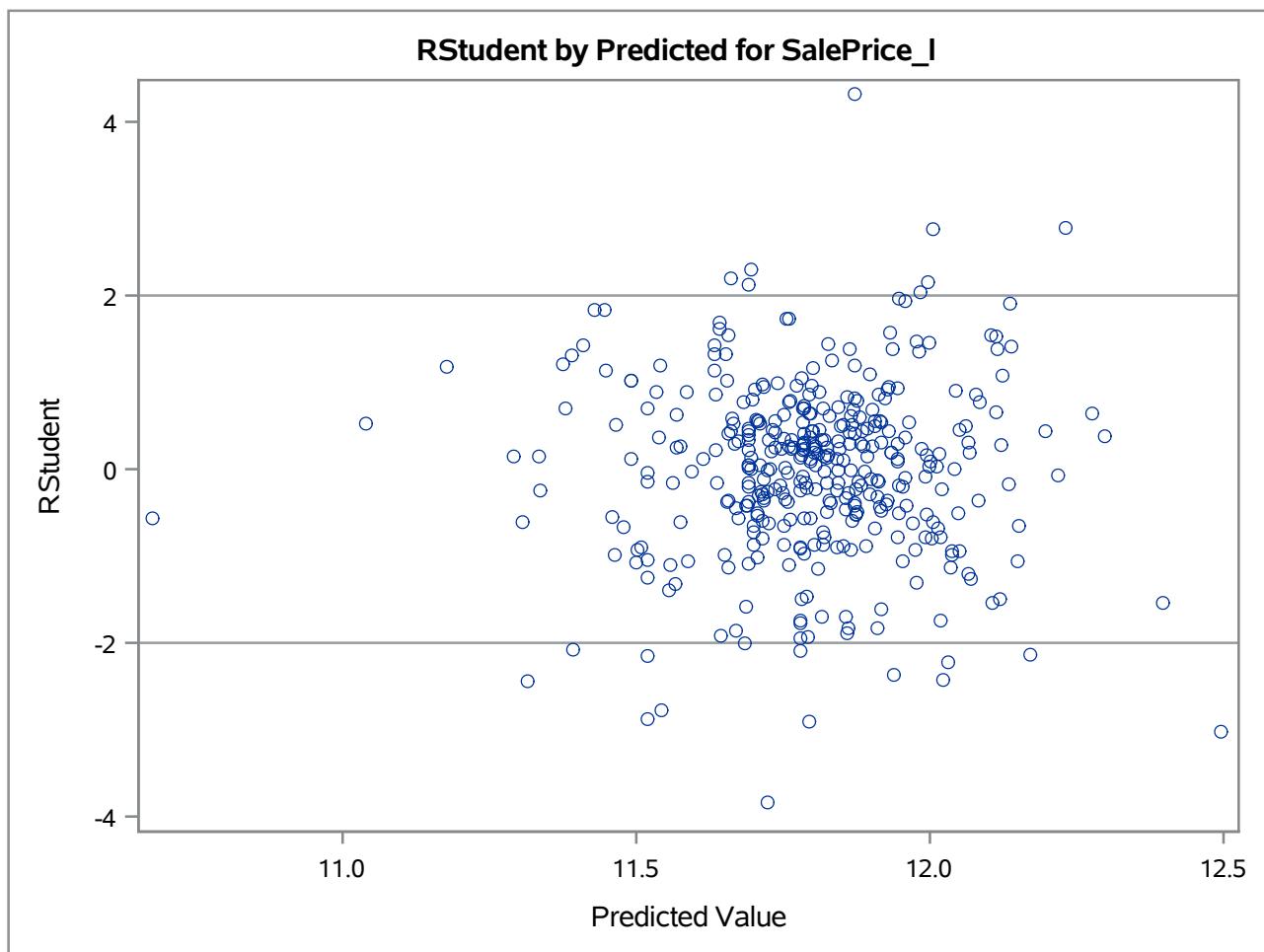
**Log-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



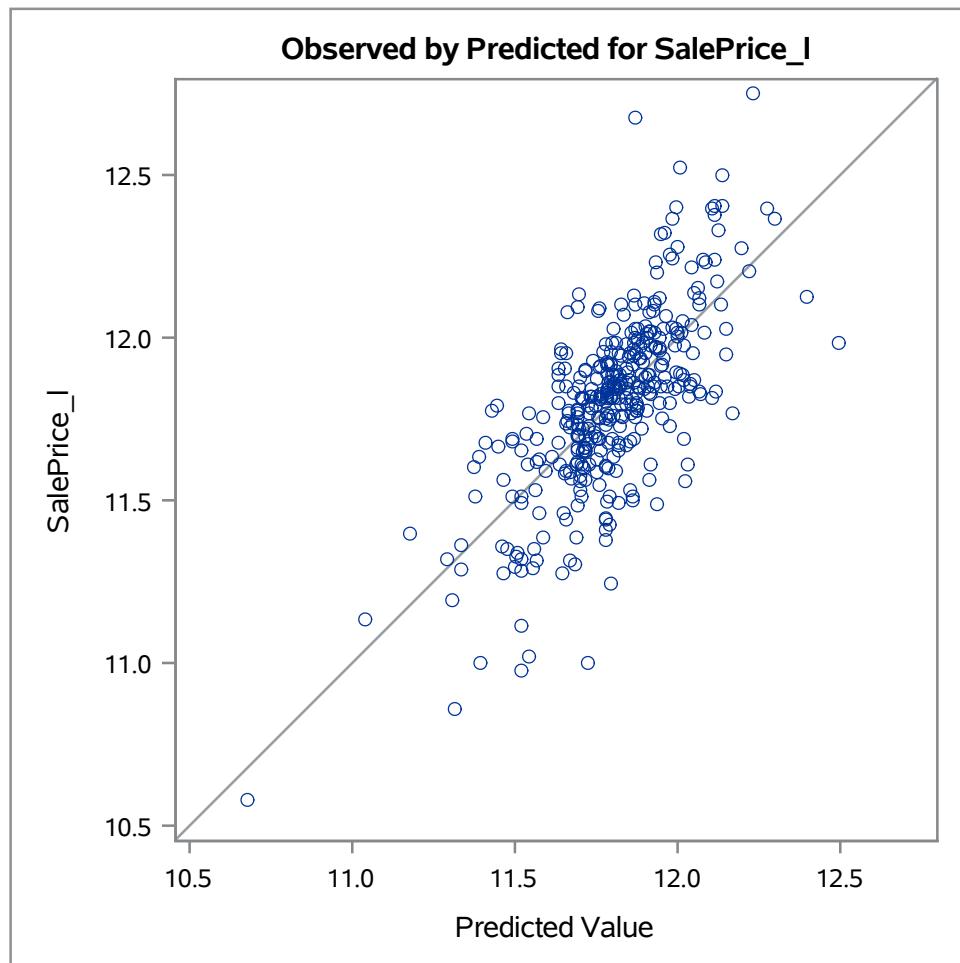
**Log-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



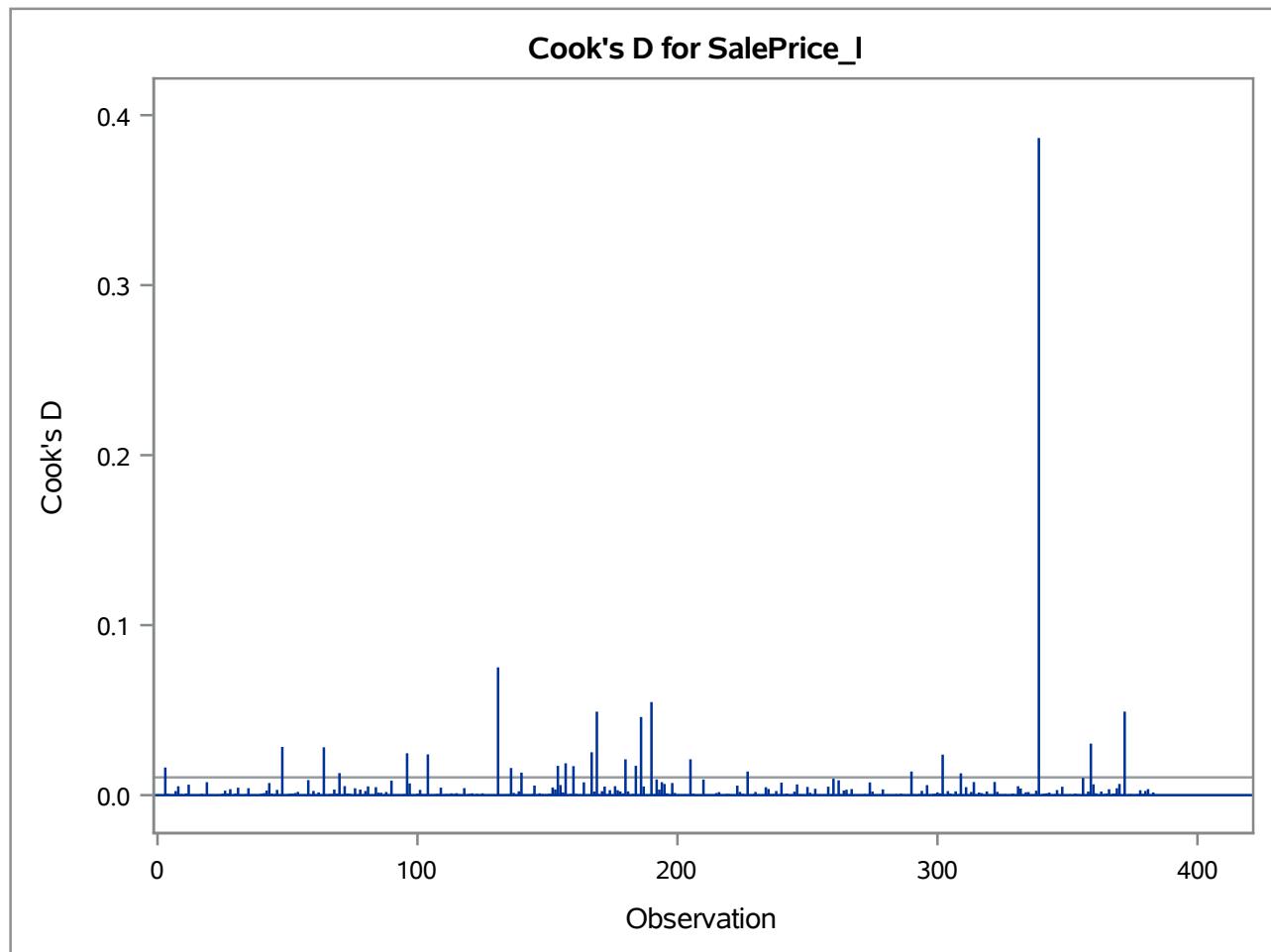
**Log-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



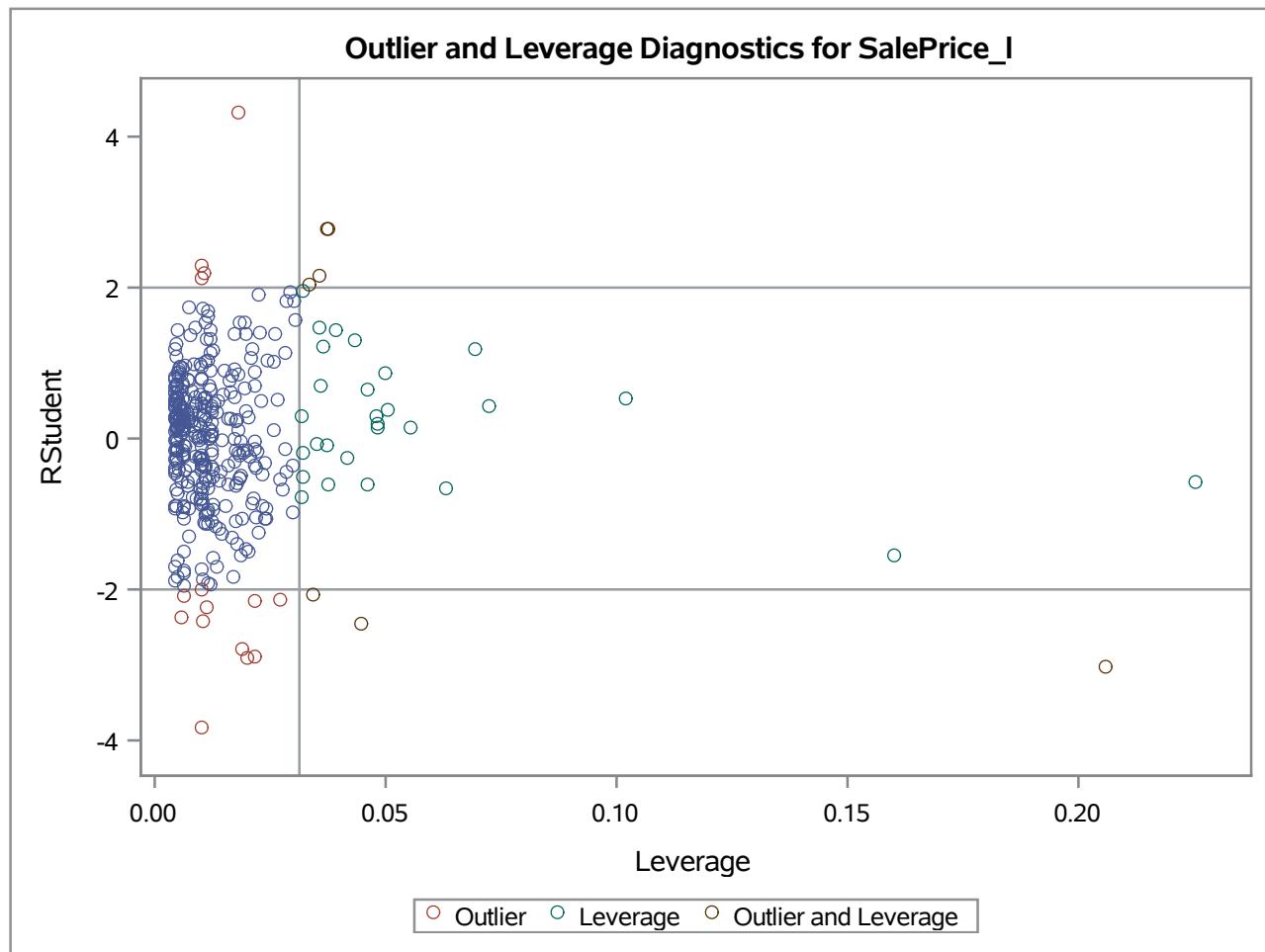
**Log-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



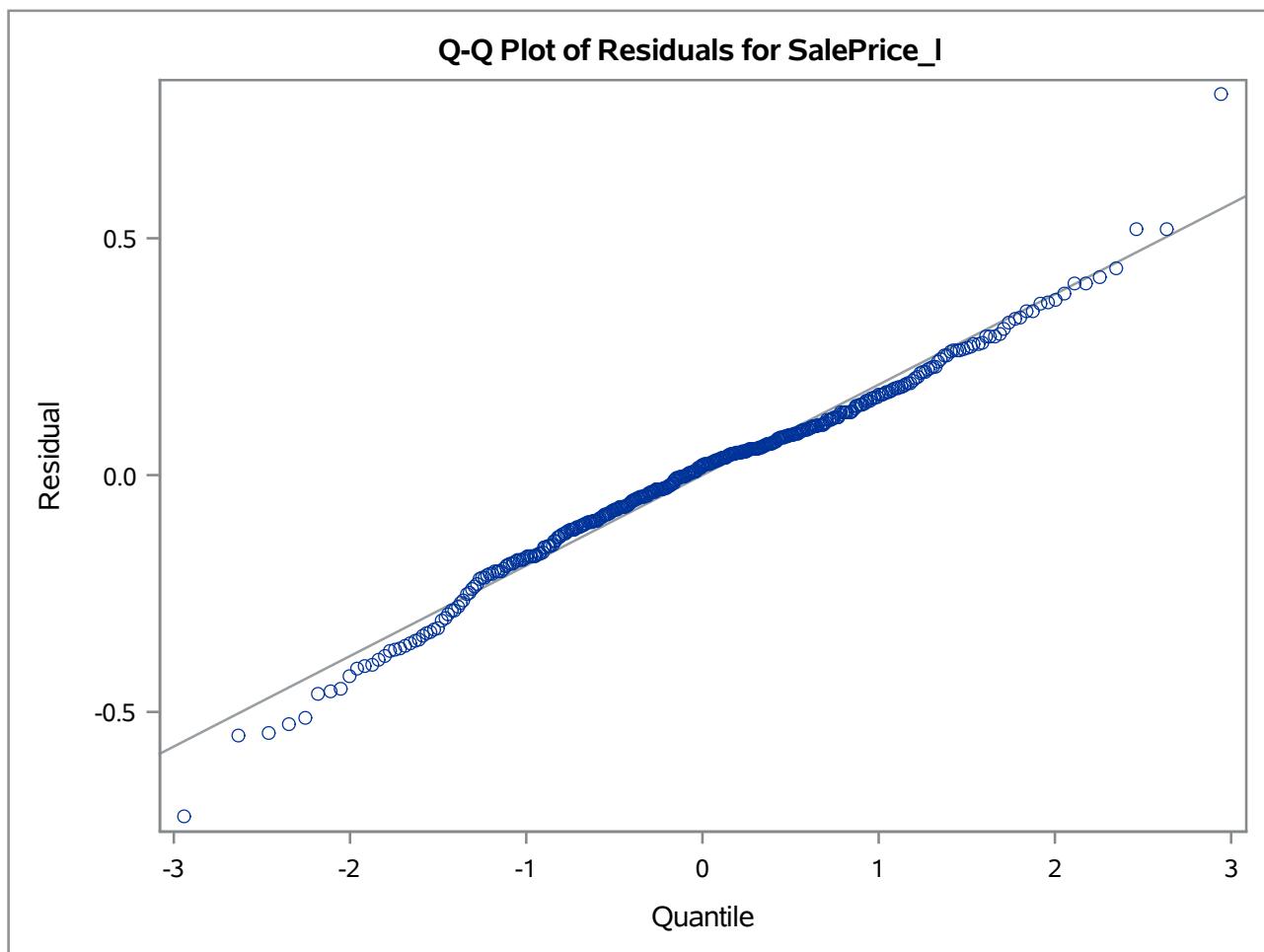
**Log-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



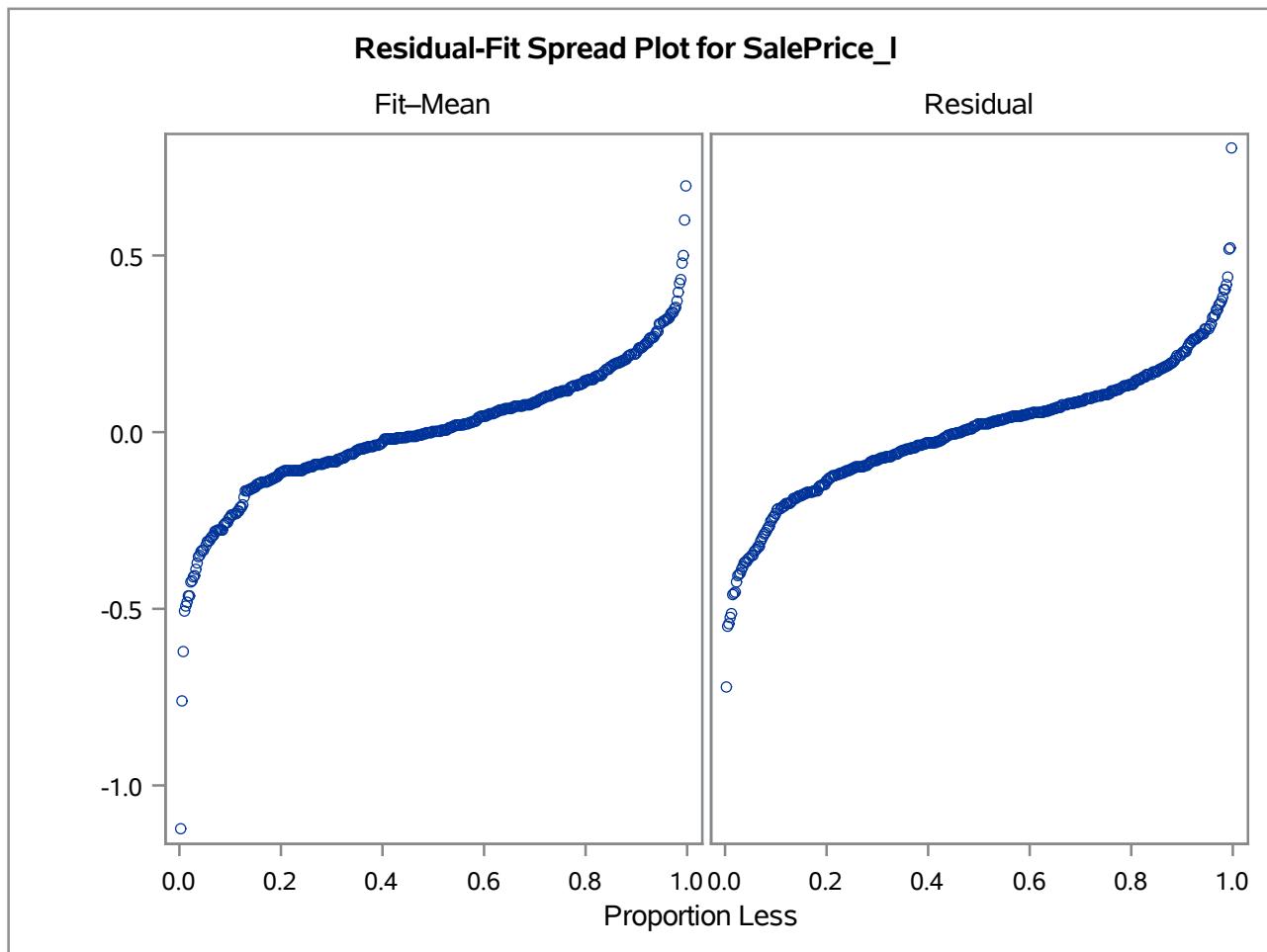
**Log-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



**Log-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



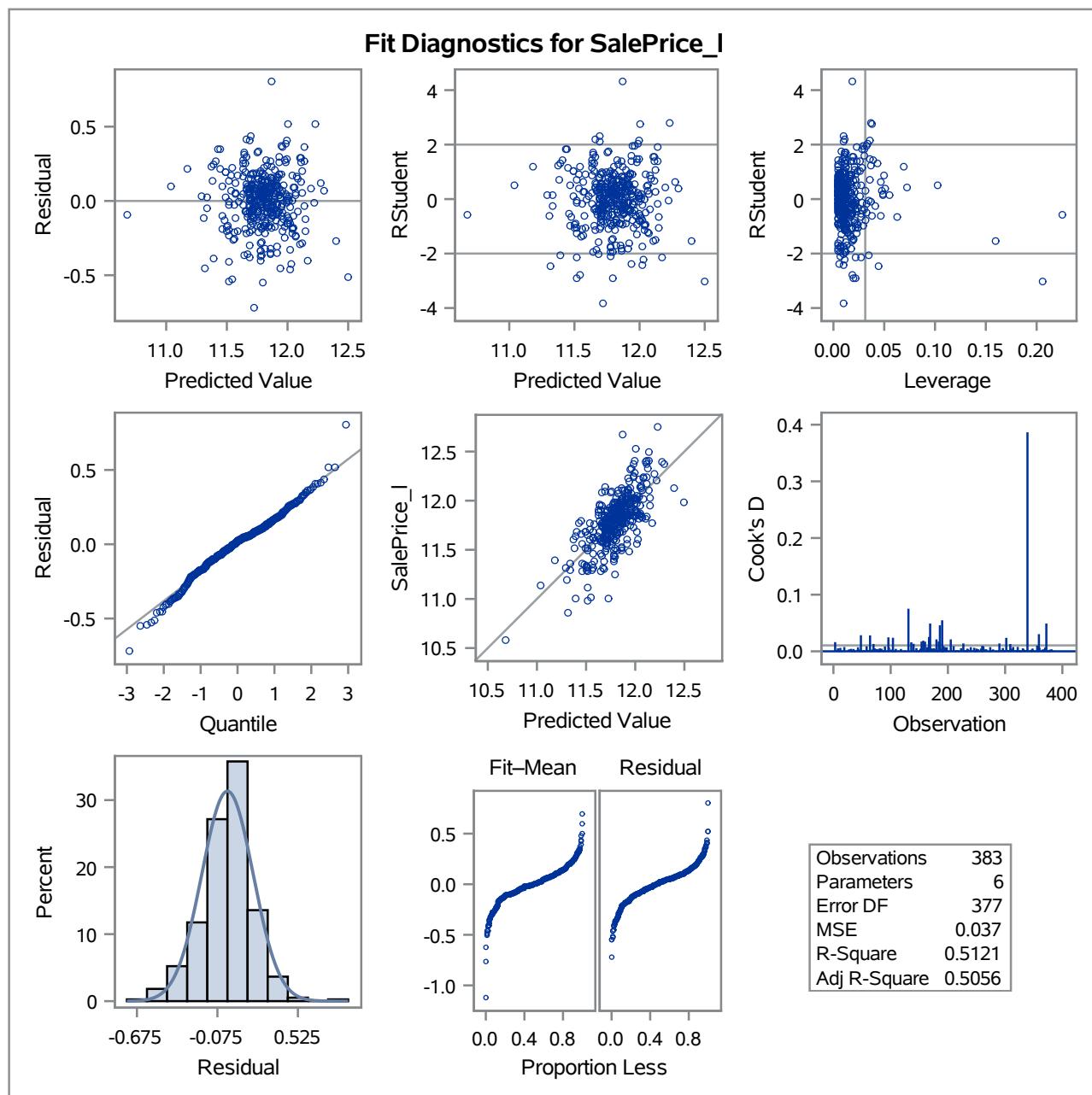
**Log-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



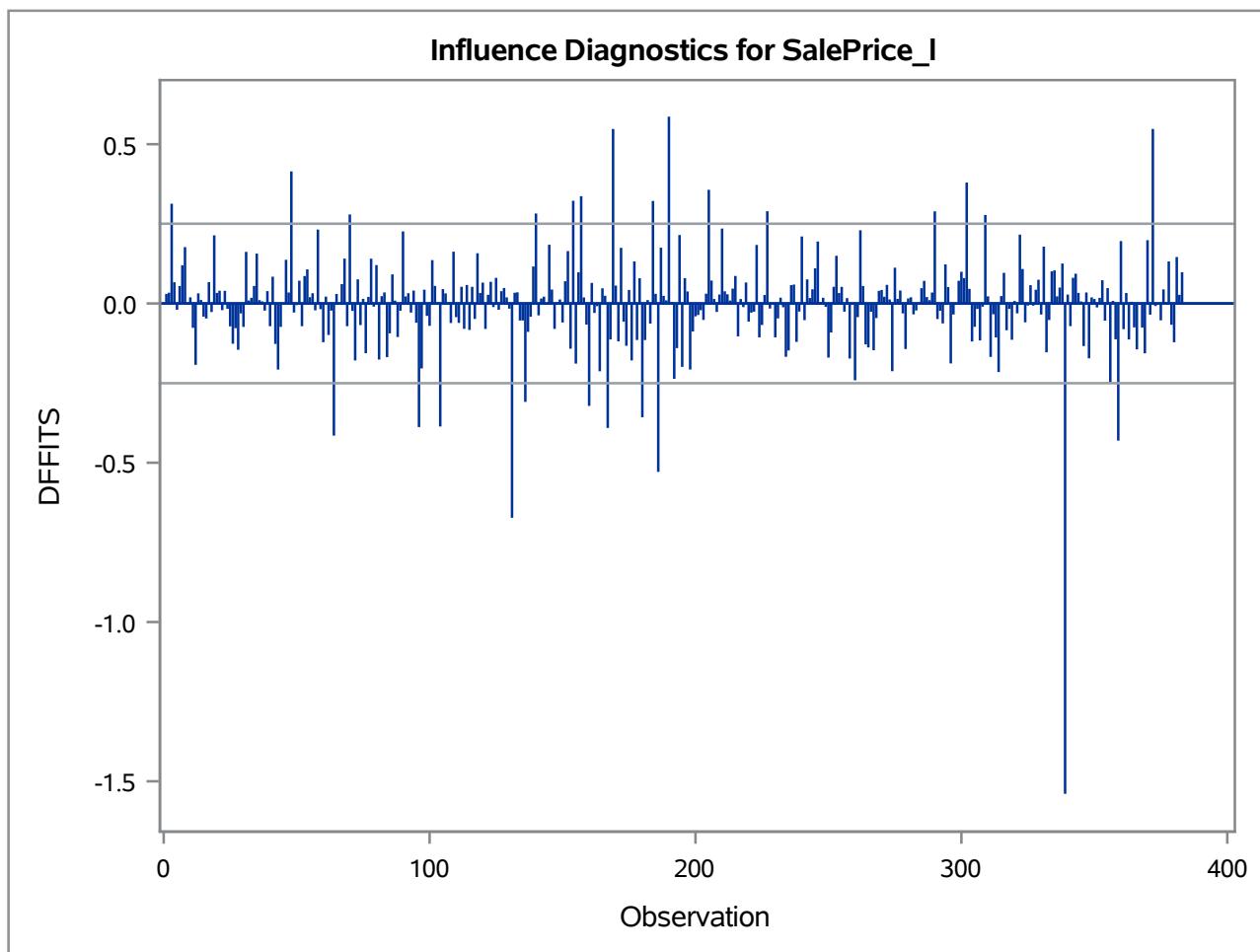
## Log-Log MLR with Dummy and Interactions

**The REG Procedure**  
**Model: MODEL1**



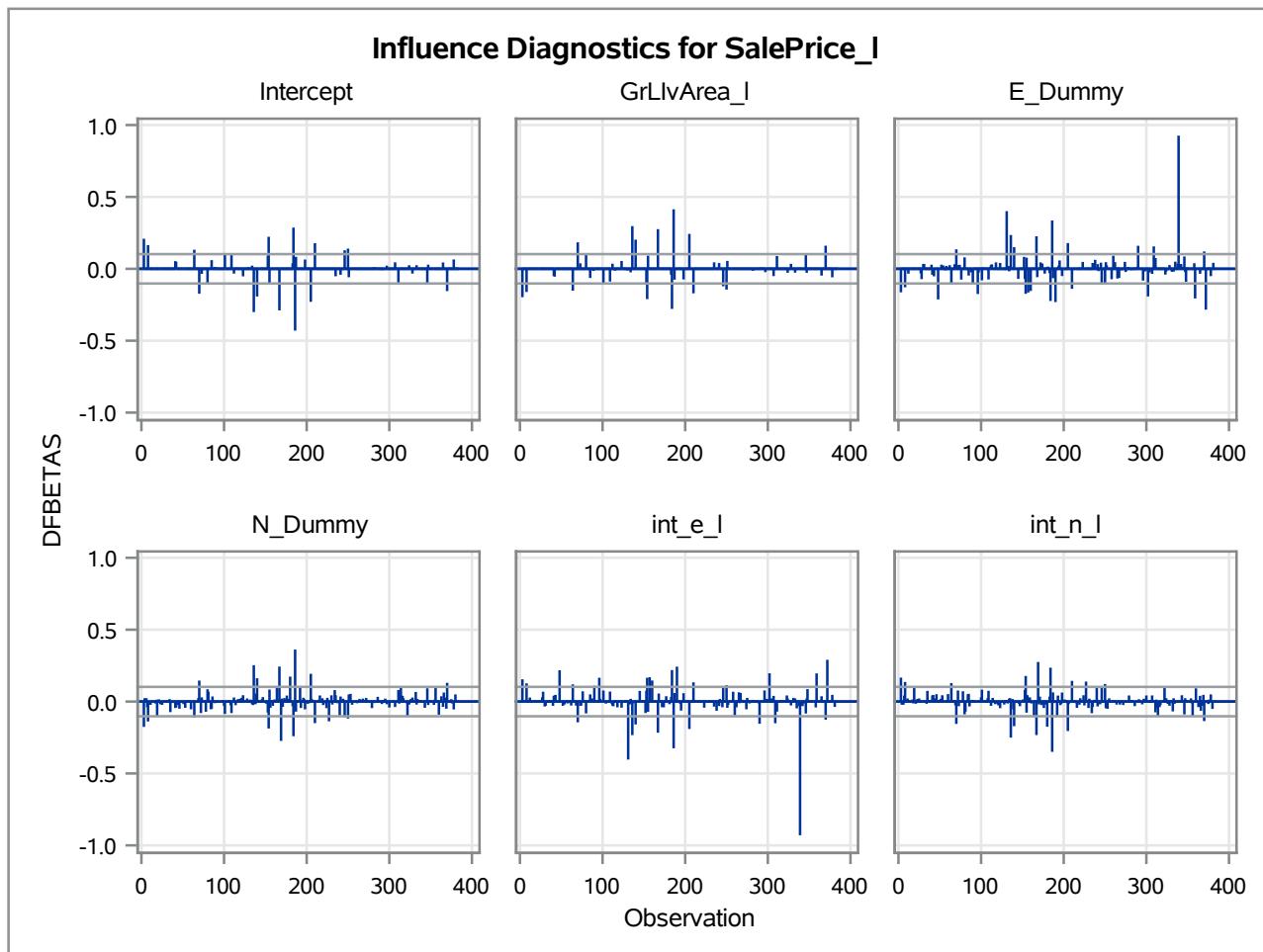
**Log-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



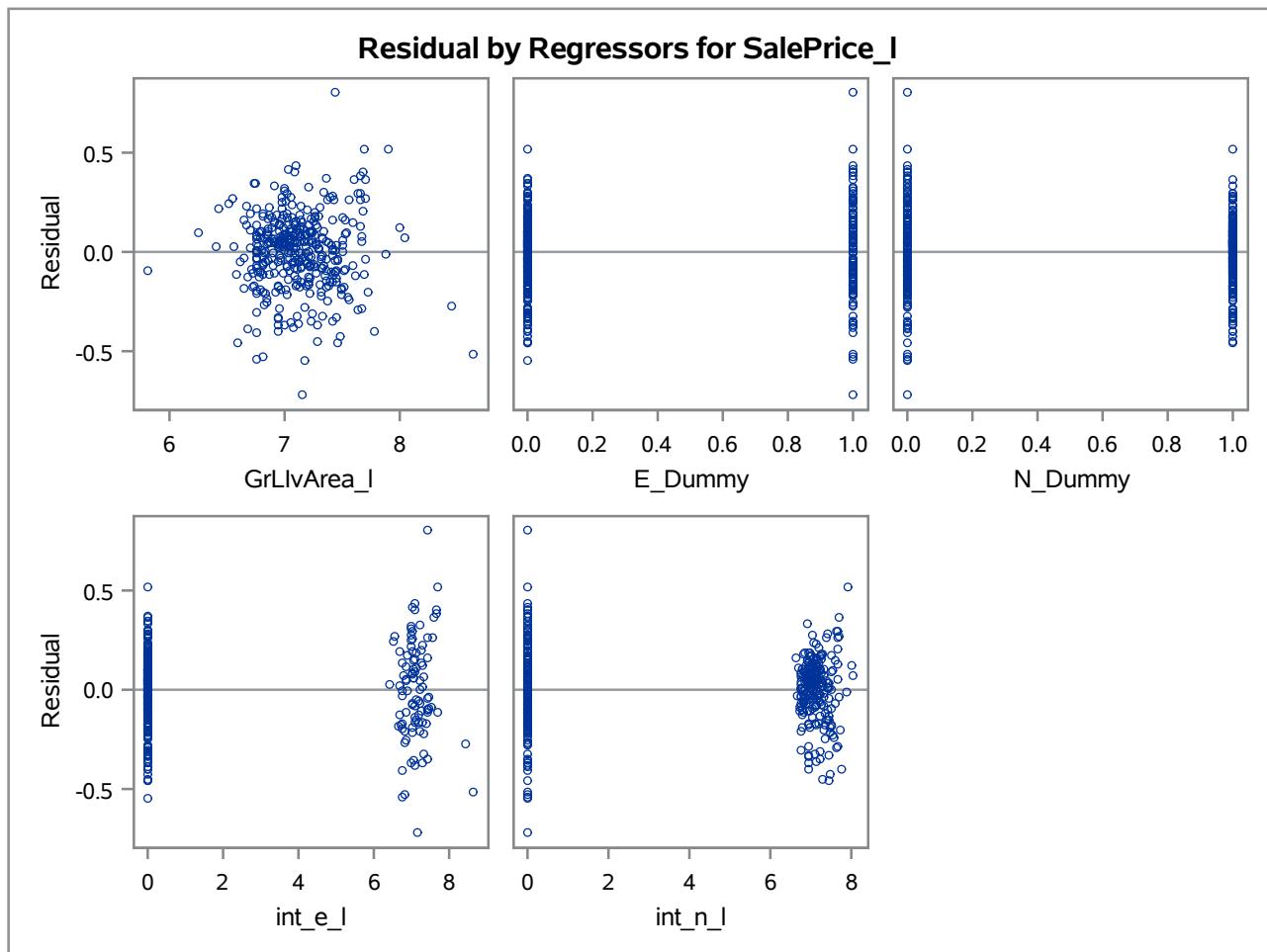
**Log-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



**Log-Log MLR with Dummy and Interactions**

The REG Procedure  
Model: MODEL1



**The MEANS Procedure**

Variable	N	Mean	Std Dev	Minimum	Maximum
GrLivArea_I	383	7.1193132	0.3120173	5.8111410	8.6379939
E_Dummy	383	0.2610966	0.4398070	0	1.0000000
N_Dummy	383	0.5874674	0.4929340	0	1.0000000

## Log-Log MLR with Dummy and Centered Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Number of Observations Read	383
Number of Observations Used	383

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
<b>Model</b>	5	14.62858	2.92572	79.14	<.0001
<b>Error</b>	377	13.93775	0.03697		
<b>Corrected Total</b>	382	28.56633			

Root MSE	0.19228	R-Square	0.5121
Dependent Mean	11.79887	Adj R-Sq	0.5056
Coeff Var	1.62962		

Parameter Estimates								
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr >  t	Variance Inflation	95% Confidence Limits	
<b>Intercept</b>	1	7.92024	0.22985	34.46	<.0001	0	7.46829	8.37220
<b>GrLlvArea_I</b>	1	0.53769	0.03236	16.61	<.0001	1.05356	0.47406	0.60133
<b>E_Dummy</b>	1	-0.04207	0.03230	-1.30	0.1936	2.08543	-0.10559	0.02144
<b>N_Dummy</b>	1	0.11208	0.02895	3.87	0.0001	2.10429	0.05515	0.16900
<b>centE</b>	1	-0.29998	0.09122	-3.29	0.0011	1.81764	-0.47934	-0.12063
<b>centN</b>	1	-0.34662	0.08482	-4.09	<.0001	1.87896	-0.51340	-0.17984

**Log-Log MLR with Dummy and Centered Interactions**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
1	10	11.7	11.6356	0.0255	11.5854	11.6859	0.0428	0.191	0.225	0.000
2	15	12.0	11.8669	0.0128	11.8417	11.8922	0.0971	0.192	0.506	0.000
3	16	11.8	11.4455	0.0325	11.3816	11.5094	0.3451	0.190	1.821	0.016
4	17	11.9	11.7621	0.0164	11.7300	11.7943	0.1496	0.192	0.781	0.001
5	20	11.8	11.8983	0.0131	11.8725	11.9242	-0.0561	0.192	-0.293	0.000
6	27	11.8	11.7104	0.0198	11.6714	11.7494	0.1011	0.191	0.529	0.001
7	29	12.2	11.9826	0.0169	11.9494	12.0158	0.2603	0.192	1.359	0.002
8	30	11.1	11.0389	0.0614	10.9181	11.1597	0.0957	0.182	0.525	0.005
9	34	12.0	12.0113	0.0188	11.9743	12.0482	0.005468	0.191	0.029	0.000
10	38	11.9	11.8833	0.0129	11.8579	11.9086	0.0549	0.192	0.286	0.000
11	39	11.6	11.7865	0.0150	11.7569	11.8160	-0.1874	0.192	-0.978	0.001
12	40	11.3	11.6698	0.0198	11.6309	11.7087	-0.3553	0.191	-1.858	0.006
13	41	12.0	11.8930	0.0130	11.8674	11.9187	0.0899	0.192	0.469	0.000
14	45	11.9	11.8264	0.0134	11.8000	11.8528	0.0301	0.192	0.157	0.000
15	52	11.6	11.7077	0.0254	11.6579	11.7576	-0.0594	0.191	-0.312	0.000
16	55	11.8	11.9057	0.0133	11.8795	11.9319	-0.1304	0.192	-0.680	0.000
17	56	12.1	11.9278	0.0140	11.9002	11.9554	0.1757	0.192	0.916	0.001
18	67	12.1	12.1347	0.0286	12.0784	12.1910	-0.0340	0.190	-0.179	0.000
19	71	12.4	12.1381	0.0289	12.0812	12.1950	0.2668	0.190	1.403	0.008
20	74	11.9	11.7993	0.0144	11.7709	11.8276	0.0845	0.192	0.441	0.000
21	77	11.8	11.7370	0.0180	11.7017	11.7723	0.0816	0.191	0.426	0.000
22	78	11.8	11.7804	0.0267	11.7278	11.8330	-0.0284	0.190	-0.149	0.000
23	81	12.2	12.1206	0.0274	12.0666	12.1745	0.0525	0.190	0.276	0.000
24	84	11.7	11.7900	0.0148	11.7609	11.8192	-0.0420	0.192	-0.219	0.000
25	91	11.6	11.7788	0.0154	11.7485	11.8091	-0.1715	0.192	-0.895	0.001
26	92	11.5	11.8601	0.0128	11.8349	11.8853	-0.3613	0.192	-1.883	0.003
27	98	11.5	11.5750	0.0243	11.5272	11.6229	-0.1160	0.191	-0.608	0.001
28	99	11.3	11.5025	0.0298	11.4439	11.5612	-0.1759	0.190	-0.926	0.004
29	100	11.8	11.8563	0.0129	11.8310	11.8816	-0.0891	0.192	-0.464	0.000
30	111	11.8	11.9173	0.0294	11.8595	11.9752	-0.0903	0.190	-0.475	0.001
31	118	12.0	11.6574	0.0201	11.6179	11.6970	0.2937	0.191	1.536	0.004
32	123	11.8	11.7967	0.0145	11.7681	11.8252	0.0237	0.192	0.124	0.000

**Log-Log MLR with Dummy and Centered Interactions**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
33	129	12.0	11.9015	0.0132	11.8755	11.9275	0.0497	0.192	0.259	0.000
34	130	11.9	11.7847	0.0151	11.7550	11.8144	0.1337	0.192	0.698	0.001
35	131	12.3	12.1239	0.0277	12.0694	12.1784	0.2044	0.190	1.074	0.004
36	133	11.9	11.8941	0.0131	11.8684	11.9198	0.0293	0.192	0.153	0.000
37	137	11.9	11.8520	0.0129	11.8266	11.8774	0.0186	0.192	0.097	0.000
38	141	11.7	11.6911	0.0213	11.6493	11.7330	-0.0384	0.191	-0.201	0.000
39	143	12.0	11.9143	0.0136	11.8876	11.9410	0.1054	0.192	0.550	0.000
40	146	11.8	11.8747	0.0261	11.8234	11.9261	-0.0994	0.190	-0.522	0.001
41	147	11.6	11.4654	0.0314	11.4036	11.5272	0.0963	0.190	0.508	0.001
42	150	11.7	11.8172	0.0280	11.7622	11.8722	-0.1645	0.190	-0.865	0.003
43	156	11.3	11.6439	0.0206	11.6033	11.6844	-0.3667	0.191	-1.918	0.007
44	157	11.6	11.7788	0.0154	11.7485	11.8091	-0.1751	0.192	-0.914	0.001
45	166	11.8	11.7541	0.0198	11.7153	11.7930	0.001755	0.191	0.009	0.000
46	172	12.3	11.9989	0.0179	11.9636	12.0341	0.2795	0.191	1.460	0.003
47	174	12.0	11.9064	0.0133	11.8802	11.9326	0.0951	0.192	0.496	0.000
48	176	12.4	11.9960	0.0363	11.9245	12.0674	0.4049	0.189	2.144	0.028
49	183	11.7	11.7483	0.0196	11.7097	11.7869	-0.0531	0.191	-0.278	0.000
50	185	11.8	11.7591	0.0262	11.7076	11.8105	-0.007116	0.190	-0.037	0.000
51	192	12.1	11.9454	0.0148	11.9163	11.9745	0.1773	0.192	0.925	0.001
52	194	11.8	11.8747	0.0261	11.8234	11.9261	-0.0994	0.190	-0.522	0.001
53	198	12.4	12.2973	0.0432	12.2124	12.3821	0.0701	0.187	0.374	0.001
54	201	11.8	11.6556	0.0202	11.6159	11.6953	0.1938	0.191	1.014	0.002
55	208	11.9	11.8053	0.0142	11.7775	11.8332	0.0512	0.192	0.267	0.000
56	210	11.9	11.8019	0.0143	11.7738	11.8300	0.0826	0.192	0.431	0.000
57	211	11.5	11.5203	0.0284	11.4645	11.5761	-0.0276	0.190	-0.145	0.000
58	212	12.1	11.6962	0.0193	11.6582	11.7341	0.4373	0.191	2.286	0.009
59	216	11.8	11.8605	0.0128	11.8352	11.8857	-0.0515	0.192	-0.269	0.000
60	224	11.5	11.6911	0.0213	11.6493	11.7330	-0.2086	0.191	-1.092	0.002
61	231	11.9	11.8441	0.0130	11.8185	11.8697	0.0608	0.192	0.317	0.000
62	240	11.6	11.8024	0.0216	11.7600	11.8449	-0.1673	0.191	-0.876	0.002
63	248	11.8	11.9109	0.0135	11.8844	11.9374	-0.0615	0.192	-0.321	0.000
64	251	11.2	11.7937	0.0271	11.7403	11.8470	-0.5486	0.190	-2.882	0.028

**Log-Log MLR with Dummy and Centered Interactions**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
65	254	12.0	11.8851	0.0129	11.8597	11.9105	0.0853	0.192	0.444	0.000
66	255	11.9	11.8894	0.0130	11.8639	11.9150	-0.004941	0.192	-0.026	0.000
67	261	12.1	11.9133	0.0135	11.8867	11.9399	0.1649	0.192	0.860	0.001
68	270	11.9	11.6519	0.0203	11.6119	11.6918	0.2531	0.191	1.324	0.003
69	274	11.8	11.9919	0.0175	11.9576	12.0263	-0.1497	0.191	-0.782	0.001
70	276	12.2	11.9330	0.0336	11.8670	11.9990	0.2978	0.189	1.573	0.013
71	287	12.0	12.0206	0.0195	11.9823	12.0589	-0.0440	0.191	-0.230	0.000
72	288	11.4	11.6878	0.0215	11.6455	11.7302	-0.3027	0.191	-1.584	0.005
73	290	11.9	11.8483	0.0292	11.7908	11.9058	0.0937	0.190	0.493	0.001
74	293	11.8	11.8769	0.0263	11.8252	11.9285	-0.0939	0.190	-0.493	0.001
75	295	12.0	11.9954	0.0177	11.9606	12.0303	0.0303	0.191	0.158	0.000
76	309	11.3	11.5185	0.0285	11.4624	11.5745	-0.1979	0.190	-1.041	0.004
77	312	11.8	11.7468	0.0173	11.7128	11.7809	0.0437	0.191	0.228	0.000
78	325	12.4	12.2764	0.0413	12.1953	12.3576	0.1202	0.188	0.640	0.003
79	328	11.9	11.9136	0.0135	11.8870	11.9403	-0.0274	0.192	-0.143	0.000
80	329	12.3	12.1961	0.0517	12.0945	12.2978	0.0799	0.185	0.432	0.002
81	331	11.7	12.0190	0.0194	11.9809	12.0570	-0.3321	0.191	-1.736	0.005
82	332	11.8	11.7860	0.0150	11.7565	11.8156	0.0562	0.192	0.293	0.000
83	340	12.0	11.8524	0.0129	11.8270	11.8778	0.0988	0.192	0.515	0.000
84	343	11.4	11.7788	0.0154	11.7485	11.8091	-0.3994	0.192	-2.084	0.005
85	346	11.9	11.9482	0.0345	11.8804	12.0160	-0.0974	0.189	-0.515	0.001
86	347	11.9	11.7400	0.0178	11.7050	11.7749	0.1884	0.191	0.984	0.001
87	348	12.0	11.9451	0.0148	11.9160	11.9742	0.0221	0.192	0.115	0.000
88	353	11.5	11.6509	0.0204	11.6109	11.6910	-0.1893	0.191	-0.990	0.002
89	362	11.9	11.9099	0.0323	11.8464	11.9734	-0.0254	0.190	-0.134	0.000
90	363	12.2	11.9358	0.0310	11.8749	11.9967	0.2628	0.190	1.385	0.009
91	367	12.0	11.9174	0.0137	11.8905	11.9443	0.0593	0.192	0.309	0.000
92	368	12.0	11.9298	0.0141	11.9020	11.9575	0.0839	0.192	0.438	0.000
93	369	11.8	11.8726	0.0128	11.8474	11.8978	-0.0820	0.192	-0.428	0.000
94	370	12.0	11.8796	0.0129	11.8543	11.9049	0.1157	0.192	0.603	0.000
95	374	11.7	11.8912	0.0130	11.8656	11.9168	-0.1713	0.192	-0.893	0.001
96	376	11.0	11.5438	0.0266	11.4916	11.5960	-0.5252	0.190	-2.758	0.025

## Log-Log MLR with Dummy and Centered Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

<b>Output Statistics</b>										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
97	387	11.3	11.6840	0.0195	11.6457	11.7223	-0.3818	0.191	-1.996	0.007
98	388	11.7	11.6574	0.0201	11.6179	11.6970	0.0786	0.191	0.411	0.000
99	391	11.7	11.7587	0.0199	11.7196	11.7978	-0.0718	0.191	-0.376	0.000
100	393	11.6	11.7009	0.0205	11.6605	11.7413	-0.1250	0.191	-0.654	0.001
101	394	11.5	11.3796	0.0364	11.3080	11.4511	0.1334	0.189	0.706	0.003
102	396	11.8	11.6662	0.0199	11.6271	11.7052	0.1014	0.191	0.530	0.001
103	398	12.0	12.0414	0.0210	12.0001	12.0828	-0.000831	0.191	-0.004	0.000
104	411	11.0	11.7229	0.0193	11.6850	11.7608	-0.7208	0.191	-3.768	0.024
105	419	11.7	11.6616	0.0200	11.6223	11.7009	0.0824	0.191	0.431	0.000
106	420	11.9	11.7860	0.0150	11.7565	11.8156	0.0775	0.192	0.405	0.000
107	425	11.8	11.8449	0.0130	11.8193	11.8705	-0.002693	0.192	-0.014	0.000
108	428	11.6	11.7141	0.0196	11.6756	11.7526	-0.1149	0.191	-0.601	0.001
109	438	11.7	11.4921	0.0301	11.4329	11.5513	0.1948	0.190	1.026	0.004
110	440	11.6	11.6893	0.0194	11.6511	11.7274	-0.0810	0.191	-0.424	0.000
111	442	11.7	11.7857	0.0208	11.7448	11.8267	-0.1073	0.191	-0.561	0.001
112	443	12.0	11.9461	0.0343	11.8786	12.0137	0.0548	0.189	0.289	0.000
113	446	11.8	11.8686	0.0257	11.8182	11.9191	-0.1127	0.191	-0.592	0.001
114	447	12.2	12.0609	0.0225	12.0166	12.1052	0.0939	0.191	0.492	0.001
115	460	11.6	11.7263	0.0256	11.6761	11.7766	-0.1181	0.191	-0.620	0.001
116	467	12.0	11.8759	0.0128	11.8507	11.9012	0.1498	0.192	0.781	0.000
117	468	11.9	11.9954	0.0177	11.9606	12.0303	-0.1006	0.191	-0.526	0.000
118	473	11.9	11.6324	0.0211	11.5909	11.6739	0.2726	0.191	1.426	0.004
119	486	11.9	11.8109	0.0139	11.7835	11.8383	0.0873	0.192	0.455	0.000
120	487	12.0	11.7936	0.0147	11.7647	11.8224	0.1640	0.192	0.856	0.001
121	492	11.8	11.9760	0.0165	11.9436	12.0085	-0.1779	0.192	-0.929	0.001
122	494	12.0	11.8729	0.0128	11.8477	11.8982	0.0782	0.192	0.408	0.000
123	498	12.1	12.0657	0.0421	11.9828	12.1485	0.0570	0.188	0.304	0.001
124	500	11.7	11.7167	0.0194	11.6786	11.7548	-0.0214	0.191	-0.112	0.000
125	503	11.8	11.6970	0.0193	11.6591	11.7350	0.1524	0.191	0.797	0.001
126	510	11.7	11.7793	0.0154	11.7490	11.8095	-0.0472	0.192	-0.246	0.000
127	511	12.0	11.9067	0.0133	11.8805	11.9330	0.1063	0.192	0.554	0.000
128	513	11.8	11.6911	0.0213	11.6493	11.7330	0.0834	0.191	0.436	0.000

**Log-Log MLR with Dummy and Centered Interactions**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
129	522	11.9	11.8635	0.0128	11.8383	11.8888	0.0549	0.192	0.286	0.000
130	523	12.0	11.9922	0.0372	11.9191	12.0654	-0.0156	0.189	-0.083	0.000
131	524	12.1	12.3978	0.0769	12.2465	12.5491	-0.2710	0.176	-1.538	0.075
132	527	11.8	11.7249	0.0188	11.6880	11.7619	0.0656	0.191	0.343	0.000
133	529	11.4	11.3351	0.0453	11.2461	11.4241	0.0270	0.187	0.145	0.000
134	532	11.8	11.8281	0.0284	11.7723	11.8839	-0.0683	0.190	-0.359	0.000
135	533	11.6	11.6704	0.0229	11.6254	11.7154	-0.0852	0.191	-0.446	0.000
136	534	10.6	10.6760	0.0913	10.4965	10.8555	-0.0970	0.169	-0.573	0.016
137	536	11.6	11.7510	0.0197	11.7123	11.7897	-0.1658	0.191	-0.867	0.001
138	538	11.6	11.6911	0.0213	11.6493	11.7330	-0.0716	0.191	-0.375	0.000
139	544	11.8	11.6348	0.0258	11.5840	11.6855	0.1633	0.191	0.857	0.002
140	547	12.3	11.9778	0.0363	11.9065	12.0492	0.2770	0.189	1.467	0.013
141	554	11.6	11.6579	0.0201	11.6184	11.6975	-0.0680	0.191	-0.356	0.000
142	556	11.6	11.6133	0.0259	11.5623	11.6642	0.0219	0.191	0.115	0.000
143	557	11.9	11.8019	0.0143	11.7738	11.8300	0.0546	0.192	0.285	0.000
144	563	11.6	11.5942	0.0231	11.5487	11.6396	-0.004272	0.191	-0.022	0.000
145	564	12.1	11.8640	0.0253	11.8142	11.9138	0.2641	0.191	1.386	0.006
146	570	11.8	11.7325	0.0183	11.6966	11.7684	0.0876	0.191	0.458	0.000
147	571	11.9	12.0190	0.0194	11.9809	12.0570	-0.1512	0.191	-0.790	0.001
148	572	11.7	11.6911	0.0213	11.6493	11.7330	0.004136	0.191	0.022	0.000
149	575	11.8	11.8092	0.0140	11.7817	11.8367	0.0330	0.192	0.172	0.000
150	576	11.7	11.8528	0.0129	11.8274	11.8781	-0.1701	0.192	-0.887	0.001
151	581	12.1	11.9291	0.0141	11.9014	11.9568	0.1821	0.192	0.950	0.001
152	583	11.7	11.4906	0.0308	11.4300	11.5512	0.1921	0.190	1.012	0.005
153	585	11.8	11.9461	0.0343	11.8786	12.0137	-0.1480	0.189	-0.782	0.003
154	587	11.8	11.4300	0.0334	11.3644	11.4956	0.3453	0.189	1.824	0.017
155	590	11.3	11.5198	0.0289	11.4630	11.5765	-0.2362	0.190	-1.243	0.006
156	606	12.2	12.0848	0.0244	12.0367	12.1329	0.1460	0.191	0.765	0.002
157	608	12.3	11.9585	0.0329	11.8937	12.0233	0.3653	0.189	1.929	0.019
158	616	11.8	11.7851	0.0151	11.7555	11.8148	0.0462	0.192	0.241	0.000
159	618	11.6	11.6733	0.0227	11.6287	11.7178	-0.1068	0.191	-0.559	0.001
160	621	11.1	11.5203	0.0284	11.4645	11.5761	-0.4078	0.190	-2.145	0.017

## Log-Log MLR with Dummy and Centered Interactions

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

<b>Output Statistics</b>										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
161	626	12.0	11.8122	0.0139	11.7848	11.8395	0.1708	0.192	0.890	0.001
162	627	11.8	11.9268	0.0140	11.8993	11.9543	-0.0781	0.192	-0.407	0.000
163	628	11.9	11.9583	0.0155	11.9279	11.9887	-0.0201	0.192	-0.105	0.000
164	629	11.8	12.1067	0.0263	12.0551	12.1583	-0.2937	0.190	-1.542	0.008
165	630	12.0	11.9022	0.0132	11.8762	11.9282	0.1325	0.192	0.691	0.000
166	634	11.8	11.7860	0.0150	11.7565	11.8156	0.0591	0.192	0.308	0.000
167	637	11.0	11.3919	0.0356	11.3219	11.4620	-0.3898	0.189	-2.063	0.025
168	639	11.4	11.4777	0.0319	11.4149	11.5405	-0.1273	0.190	-0.671	0.002
169	643	12.8	12.2308	0.0371	12.1578	12.3038	0.5205	0.189	2.759	0.049
170	646	11.9	11.7512	0.0170	11.7177	11.7847	0.1212	0.192	0.633	0.001
171	647	11.5	11.7824	0.0152	11.7525	11.8124	-0.2867	0.192	-1.496	0.002
172	648	12.0	11.6429	0.0207	11.6023	11.6835	0.3083	0.191	1.613	0.005
173	649	12.0	12.0484	0.0216	12.0061	12.0908	-0.0973	0.191	-0.509	0.001
174	652	11.6	11.8104	0.0220	11.7672	11.8536	-0.2205	0.191	-1.154	0.003
175	657	11.9	11.7847	0.0151	11.7550	11.8144	0.1032	0.192	0.539	0.000
176	659	11.5	11.9386	0.0145	11.9101	11.9671	-0.4510	0.192	-2.352	0.005
177	660	12.0	11.8021	0.0216	11.7597	11.8445	0.2237	0.191	1.171	0.003
178	663	11.6	11.9167	0.0136	11.8899	11.9435	-0.3085	0.192	-1.608	0.002
179	664	11.8	11.6827	0.0195	11.6444	11.7210	0.1487	0.191	0.777	0.001
180	667	11.8	12.1704	0.0317	12.1080	12.2328	-0.4029	0.190	-2.124	0.021
181	672	11.5	11.7595	0.0199	11.7203	11.7986	-0.2112	0.191	-1.104	0.002
182	675	11.8	11.8206	0.0136	11.7938	11.8473	0.0288	0.192	0.150	0.000
183	695	11.9	11.9282	0.0333	11.8627	11.9937	-0.0682	0.189	-0.360	0.001
184	697	11.4	11.1777	0.0506	11.0782	11.2772	0.2187	0.185	1.179	0.017
185	698	11.7	11.6680	0.0198	11.6290	11.7069	0.0560	0.191	0.293	0.000
186	711	10.9	11.3158	0.0406	11.2359	11.3956	-0.4568	0.188	-2.430	0.046
187	714	11.8	11.5414	0.0280	11.4863	11.5964	0.2262	0.190	1.189	0.005
188	723	11.7	11.6911	0.0213	11.6493	11.7330	0.0409	0.191	0.214	0.000
189	724	11.8	11.7964	0.0213	11.7546	11.8383	0.0166	0.191	0.087	0.000
190	725	12.7	11.8714	0.0259	11.8205	11.9222	0.8047	0.191	4.223	0.055
191	726	11.7	11.6911	0.0213	11.6493	11.7330	0.008294	0.191	0.043	0.000
192	729	11.6	12.0319	0.0203	11.9920	12.0719	-0.4237	0.191	-2.216	0.009

**Log-Log MLR with Dummy and Centered Interactions**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
193	737	11.4	11.7788	0.0154	11.7485	11.8091	-0.3331	0.192	-1.738	0.003
194	739	12.1	11.6910	0.0194	11.6529	11.7291	0.4042	0.191	2.113	0.008
195	750	11.5	11.8169	0.0223	11.7730	11.8608	-0.3242	0.191	-1.697	0.007
196	755	12.0	11.7724	0.0158	11.7414	11.8034	0.1852	0.192	0.967	0.001
197	761	11.8	11.6911	0.0213	11.6493	11.7330	0.0648	0.191	0.339	0.000
198	762	11.5	11.7905	0.0270	11.7374	11.8437	-0.2776	0.190	-1.458	0.007
199	772	11.5	11.6996	0.0193	11.6617	11.7375	-0.1668	0.191	-0.872	0.001
200	773	11.6	11.6537	0.0203	11.6139	11.6936	-0.0732	0.191	-0.383	0.000
201	774	11.6	11.7167	0.0194	11.6786	11.7548	-0.0684	0.191	-0.357	0.000
202	798	11.6	11.6385	0.0255	11.5883	11.6886	-0.0302	0.191	-0.159	0.000
203	805	11.7	11.8172	0.0137	11.7903	11.8442	-0.1388	0.192	-0.724	0.000
204	807	11.8	11.7507	0.0171	11.7171	11.7843	0.0660	0.192	0.345	0.000
205	808	12.3	11.9477	0.0344	11.8800	12.0154	0.3695	0.189	1.953	0.021
206	809	12.0	11.7993	0.0144	11.7709	11.8276	0.1833	0.192	0.956	0.001
207	814	12.0	11.9334	0.0143	11.9053	11.9615	0.0363	0.192	0.189	0.000
208	815	11.7	11.7122	0.0192	11.6744	11.7500	-0.0509	0.191	-0.266	0.000
209	817	11.8	11.7640	0.0163	11.7321	11.7960	0.0637	0.192	0.333	0.000
210	827	11.6	11.3754	0.0367	11.3033	11.4475	0.2283	0.189	1.209	0.009
211	831	12.0	11.9167	0.0136	11.8899	11.9435	0.1030	0.192	0.537	0.000
212	834	12.0	11.9571	0.0154	11.9268	11.9874	0.0687	0.192	0.358	0.000
213	835	11.8	11.8239	0.0135	11.7973	11.8504	0.0251	0.192	0.131	0.000
214	840	11.8	11.6910	0.0194	11.6529	11.7291	0.0881	0.191	0.461	0.000
215	843	12.1	11.8325	0.0133	11.8064	11.8586	0.2395	0.192	1.248	0.001
216	844	11.9	12.0383	0.0208	11.9974	12.0791	-0.1818	0.191	-0.951	0.002
217	854	12.0	11.9344	0.0143	11.9062	11.9625	0.0360	0.192	0.188	0.000
218	864	11.8	11.8255	0.0135	11.7991	11.8520	-0.0312	0.192	-0.163	0.000
219	866	11.9	11.7612	0.0164	11.7289	11.7935	0.1471	0.192	0.768	0.001
220	871	11.6	11.7073	0.0201	11.6678	11.7467	-0.1036	0.191	-0.542	0.001
221	873	11.7	11.7156	0.0195	11.6774	11.7539	-0.0543	0.191	-0.284	0.000
222	874	11.8	11.8726	0.0128	11.8474	11.8978	-0.0745	0.192	-0.388	0.000
223	881	12.0	11.6410	0.0207	11.6003	11.6818	0.3230	0.191	1.690	0.006
224	885	11.5	11.7062	0.0201	11.6666	11.7458	-0.1933	0.191	-1.011	0.002

**Log-Log MLR with Dummy and Centered Interactions**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
225	887	11.9	12.0146	0.0190	11.9772	12.0520	-0.1301	0.191	-0.680	0.001
226	888	11.8	11.7685	0.0202	11.7288	11.8082	0.0482	0.191	0.252	0.000
227	889	12.5	12.1369	0.0288	12.0802	12.1935	0.3619	0.190	1.904	0.014
228	890	11.9	11.9536	0.0152	11.9237	11.9836	-0.0386	0.192	-0.201	0.000
229	891	11.7	11.7229	0.0189	11.6856	11.7601	-0.003743	0.191	-0.020	0.000
230	896	11.8	12.0372	0.0207	11.9965	12.0779	-0.1878	0.191	-0.983	0.002
231	901	11.6	11.6878	0.0215	11.6455	11.7302	-0.0796	0.191	-0.417	0.000
232	902	11.9	11.8865	0.0129	11.8611	11.9120	0.0517	0.192	0.269	0.000
233	906	11.8	11.7892	0.0149	11.7599	11.8184	-0.0294	0.192	-0.153	0.000
234	911	11.9	12.1489	0.0299	12.0902	12.2076	-0.2022	0.190	-1.065	0.005
235	913	11.4	11.5871	0.0265	11.5349	11.6392	-0.2020	0.190	-1.060	0.004
236	918	11.8	11.7034	0.0193	11.6655	11.7413	0.1096	0.191	0.573	0.001
237	920	12.1	11.9241	0.0139	11.8968	11.9515	0.1570	0.192	0.818	0.001
238	922	11.9	12.0060	0.0373	11.9327	12.0792	-0.1153	0.189	-0.611	0.002
239	932	11.7	11.7234	0.0189	11.6862	11.7606	-0.0492	0.191	-0.257	0.000
240	935	12.4	12.1042	0.0261	12.0530	12.1554	0.2925	0.191	1.535	0.007
241	936	11.3	11.3358	0.0393	11.2586	11.4130	-0.0472	0.188	-0.251	0.000
242	943	11.9	11.7857	0.0208	11.7448	11.8267	0.1327	0.191	0.694	0.001
243	947	11.9	11.8239	0.0135	11.7973	11.8504	0.0467	0.192	0.244	0.000
244	951	11.8	11.6911	0.0213	11.6493	11.7330	0.0765	0.191	0.400	0.000
245	955	11.8	11.5857	0.0236	11.5393	11.6322	0.1701	0.191	0.892	0.002
246	961	11.7	11.4493	0.0323	11.3858	11.5128	0.2163	0.190	1.141	0.006
247	968	11.8	11.8045	0.0142	11.7766	11.8324	0.008548	0.192	0.045	0.000
248	970	11.8	11.8032	0.0143	11.7752	11.8312	0.0462	0.192	0.241	0.000
249	971	11.8	11.8433	0.0130	11.8177	11.8690	-0.0303	0.192	-0.158	0.000
250	975	12.0	12.1507	0.0483	12.0558	12.2457	-0.1220	0.186	-0.655	0.005
251	977	11.4	11.4598	0.0317	11.3974	11.5222	-0.1035	0.190	-0.546	0.001
252	979	11.6	11.5380	0.0270	11.4849	11.5911	0.0702	0.190	0.369	0.000
253	981	12.1	11.7598	0.0165	11.7273	11.7922	0.3320	0.192	1.733	0.004
254	986	11.7	11.6752	0.0196	11.6365	11.7138	0.0609	0.191	0.318	0.000
255	993	12.1	12.0515	0.0218	12.0087	12.0944	0.0874	0.191	0.457	0.000
256	996	11.7	11.7445	0.0259	11.6937	11.7954	-0.0360	0.191	-0.189	0.000

**Log-Log MLR with Dummy and Centered Interactions**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
257	997	11.8	11.7833	0.0152	11.7535	11.8132	0.0407	0.192	0.213	0.000
258	1001	11.3	11.5663	0.0249	11.5173	11.6153	-0.2518	0.191	-1.321	0.005
259	1007	12.0	11.9991	0.0180	11.9638	12.0345	0.005428	0.191	0.028	0.000
260	1012	11.5	11.8609	0.0251	11.8115	11.9102	-0.3479	0.191	-1.825	0.010
261	1015	11.7	11.7975	0.0145	11.7690	11.8260	-0.1090	0.192	-0.568	0.000
262	1021	12.1	11.6607	0.0200	11.6213	11.7001	0.4176	0.191	2.184	0.009
263	1027	12.0	11.8711	0.0128	11.8459	11.8963	0.1577	0.192	0.822	0.001
264	1029	11.6	11.9112	0.0135	11.8847	11.9377	-0.3495	0.192	-1.822	0.003
265	1036	11.3	11.5087	0.0293	11.4511	11.5664	-0.1701	0.190	-0.895	0.003
266	1046	11.8	11.8820	0.0266	11.8296	11.9344	-0.0354	0.190	-0.186	0.000
267	1050	11.3	11.5585	0.0255	11.5084	11.6086	-0.2093	0.191	-1.098	0.004
268	1053	12.0	12.0827	0.0243	12.0349	12.1304	-0.0690	0.191	-0.362	0.000
269	1054	11.9	11.8159	0.0223	11.7721	11.8597	0.0652	0.191	0.341	0.000
270	1065	11.9	11.8280	0.0134	11.8017	11.8543	0.1167	0.192	0.608	0.000
271	1068	12.0	11.9858	0.0171	11.9522	12.0194	0.0453	0.192	0.237	0.000
272	1070	11.8	11.7067	0.0201	11.6672	11.7463	0.1063	0.191	0.556	0.001
273	1071	11.8	11.7824	0.0152	11.7525	11.8124	0.0306	0.192	0.160	0.000
274	1073	11.4	11.7915	0.0211	11.7501	11.8329	-0.3674	0.191	-1.922	0.007
275	1074	12.0	11.7807	0.0206	11.7401	11.8212	0.1991	0.191	1.042	0.002
276	1078	11.8	11.8036	0.0142	11.7756	11.8316	0.0372	0.192	0.194	0.000
277	1084	12.0	11.8662	0.0128	11.8410	11.8914	0.1167	0.192	0.608	0.000
278	1089	11.8	11.8747	0.0261	11.8234	11.9261	-0.0434	0.190	-0.228	0.000
279	1091	11.4	11.7788	0.0154	11.7485	11.8091	-0.3395	0.192	-1.772	0.003
280	1094	11.9	11.8465	0.0130	11.8210	11.8720	0.0449	0.192	0.234	0.000
281	1095	11.8	11.7290	0.0185	11.6926	11.7654	0.0386	0.191	0.202	0.000
282	1099	11.8	11.8049	0.0275	11.7508	11.8590	-0.0451	0.190	-0.237	0.000
283	1102	11.7	11.7360	0.0180	11.7005	11.7715	-0.0449	0.191	-0.235	0.000
284	1103	11.8	11.8197	0.0136	11.7929	11.8465	-0.006712	0.192	-0.035	0.000
285	1104	12.0	11.8441	0.0130	11.8185	11.8697	0.1357	0.192	0.707	0.000
286	1113	11.8	11.6641	0.0234	11.6180	11.7101	0.1104	0.191	0.579	0.001
287	1114	11.8	11.7640	0.0163	11.7321	11.7960	0.0453	0.192	0.236	0.000
288	1120	11.8	11.7788	0.0154	11.7485	11.8091	0.0245	0.192	0.128	0.000

**Log-Log MLR with Dummy and Centered Interactions**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
289	1123	11.6	11.5750	0.0243	11.5272	11.6229	0.0512	0.191	0.269	0.000
290	1124	11.7	11.4094	0.0381	11.3344	11.4844	0.2690	0.188	1.428	0.014
291	1126	11.7	11.7626	0.0163	11.7305	11.7947	-0.1099	0.192	-0.574	0.000
292	1136	11.5	11.5633	0.0272	11.5098	11.6168	-0.0306	0.190	-0.161	0.000
293	1137	11.7	11.8666	0.0128	11.8414	11.8918	-0.1797	0.192	-0.937	0.001
294	1140	11.9	11.7014	0.0253	11.6516	11.7512	0.1761	0.191	0.924	0.003
295	1141	11.8	11.7370	0.0180	11.7017	11.7723	0.1052	0.191	0.550	0.000
296	1145	11.3	11.5552	0.0257	11.5046	11.6057	-0.2654	0.191	-1.393	0.006
297	1146	11.9	11.9477	0.0344	11.8800	12.0154	-0.0360	0.189	-0.190	0.000
298	1151	11.7	11.7269	0.0187	11.6903	11.7636	0.001089	0.191	0.006	0.000
299	1152	11.9	11.7950	0.0212	11.7533	11.8368	0.1227	0.191	0.642	0.001
300	1155	12.2	12.0435	0.0212	12.0019	12.0852	0.1715	0.191	0.897	0.002
301	1157	12.1	11.8715	0.0128	11.8462	11.8967	0.2287	0.192	1.192	0.001
302	1169	12.4	11.9838	0.0352	11.9145	12.0530	0.3836	0.189	2.029	0.024
303	1172	12.0	11.8700	0.0128	11.8447	11.8952	0.1315	0.192	0.686	0.000
304	1180	11.4	11.6570	0.0201	11.6174	11.6966	-0.2166	0.191	-1.133	0.002
305	1186	11.6	11.7000	0.0193	11.6621	11.7379	-0.1392	0.191	-0.728	0.001
306	1201	11.7	11.6911	0.0213	11.6493	11.7330	-0.0293	0.191	-0.154	0.000
307	1203	11.7	11.8196	0.0281	11.7645	11.8748	-0.1497	0.190	-0.787	0.002
308	1209	11.8	11.8781	0.0129	11.8529	11.9034	-0.0287	0.192	-0.150	0.000
309	1213	11.6	11.3897	0.0400	11.3110	11.4683	0.2455	0.188	1.305	0.013
310	1215	11.8	11.7598	0.0165	11.7273	11.7922	0.0495	0.192	0.259	0.000
311	1219	11.3	11.4993	0.0298	11.4408	11.5579	-0.2033	0.190	-1.070	0.005
312	1221	11.7	11.7167	0.0194	11.6786	11.7548	-0.0640	0.191	-0.335	0.000
313	1223	11.9	12.0502	0.0217	12.0076	12.0929	-0.1796	0.191	-0.940	0.002
314	1224	11.8	12.1193	0.0273	12.0655	12.1730	-0.2850	0.190	-1.497	0.008
315	1226	11.9	11.8214	0.0136	11.7947	11.8481	0.0631	0.192	0.329	0.000
316	1228	11.9	11.7167	0.0194	11.6786	11.7548	0.1815	0.191	0.949	0.002
317	1230	11.8	11.9543	0.0153	11.9243	11.9843	-0.2023	0.192	-1.056	0.001
318	1232	11.8	11.8425	0.0131	11.8169	11.8682	-0.0482	0.192	-0.251	0.000
319	1233	11.5	11.8559	0.0129	11.8306	11.8812	-0.3251	0.192	-1.695	0.002
320	1234	11.9	11.8417	0.0131	11.8161	11.8674	0.0218	0.192	0.114	0.000

**Log-Log MLR with Dummy and Centered Interactions**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
321	1250	11.7	11.7545	0.0168	11.7215	11.7876	-0.0677	0.192	-0.353	0.000
322	1251	12.4	12.1135	0.0268	12.0607	12.1662	0.2915	0.190	1.531	0.008
323	1255	12.0	11.8584	0.0249	11.8093	11.9074	0.1578	0.191	0.827	0.002
324	1256	11.8	11.8311	0.0285	11.7750	11.8871	-0.0752	0.190	-0.396	0.001
325	1258	11.5	11.5203	0.0284	11.4645	11.5761	-0.008350	0.190	-0.044	0.000
326	1260	11.9	11.7851	0.0151	11.7555	11.8148	0.1399	0.192	0.730	0.001
327	1262	11.8	11.7833	0.0152	11.7535	11.8132	-0.0165	0.192	-0.086	0.000
328	1264	12.1	12.0675	0.0423	11.9844	12.1506	0.0360	0.188	0.192	0.000
329	1265	12.1	11.8976	0.0131	11.8718	11.9235	0.2086	0.192	1.088	0.001
330	1270	11.9	11.9596	0.0155	11.9290	11.9901	-0.0820	0.192	-0.428	0.000
331	1274	12.1	11.7549	0.0198	11.7160	11.7938	0.3290	0.191	1.720	0.005
332	1276	11.8	12.0688	0.0232	12.0233	12.1144	-0.2411	0.191	-1.263	0.004
333	1286	11.8	11.8576	0.0297	11.7993	11.9159	-0.0633	0.190	-0.333	0.000
334	1291	12.1	11.8272	0.0134	11.8008	11.8536	0.2763	0.192	1.440	0.002
335	1295	11.7	11.5203	0.0284	11.4645	11.5761	0.1324	0.190	0.696	0.002
336	1296	11.8	11.7842	0.0151	11.7545	11.8140	0.0544	0.192	0.284	0.000
337	1297	12.0	11.8172	0.0137	11.7903	11.8442	0.1339	0.192	0.698	0.000
338	1298	11.8	11.6324	0.0211	11.5909	11.6739	0.2170	0.191	1.136	0.003
339	1299	12.0	12.4954	0.0872	12.3238	12.6669	-0.5125	0.171	-2.991	0.387
340	1300	11.9	11.8643	0.0128	11.8391	11.8895	0.0804	0.192	0.419	0.000
341	1305	11.8	11.8744	0.0261	11.8232	11.9257	-0.0991	0.190	-0.520	0.001
342	1315	11.7	11.5685	0.0248	11.5198	11.6172	0.1184	0.191	0.621	0.001
343	1316	12.2	12.1139	0.0269	12.0611	12.1667	0.1261	0.190	0.662	0.001
344	1320	11.6	11.5685	0.0248	11.5198	11.6172	0.0488	0.191	0.256	0.000
345	1321	12.0	11.9451	0.0148	11.9160	11.9742	0.0157	0.192	0.082	0.000
346	1322	11.2	11.3056	0.0413	11.2244	11.3868	-0.1142	0.188	-0.608	0.003
347	1324	11.3	11.2918	0.0423	11.2087	11.3749	0.0287	0.188	0.153	0.000
348	1327	11.3	11.4631	0.0332	11.3978	11.5284	-0.1859	0.189	-0.982	0.005
349	1333	11.5	11.4906	0.0308	11.4300	11.5512	0.0224	0.190	0.118	0.000
350	1341	11.7	11.6955	0.0210	11.6543	11.7367	0.0245	0.191	0.128	0.000
351	1351	12.2	12.2184	0.0360	12.1476	12.2892	-0.0123	0.189	-0.065	0.000
352	1352	12.0	12.0157	0.0191	11.9781	12.0533	0.0337	0.191	0.176	0.000

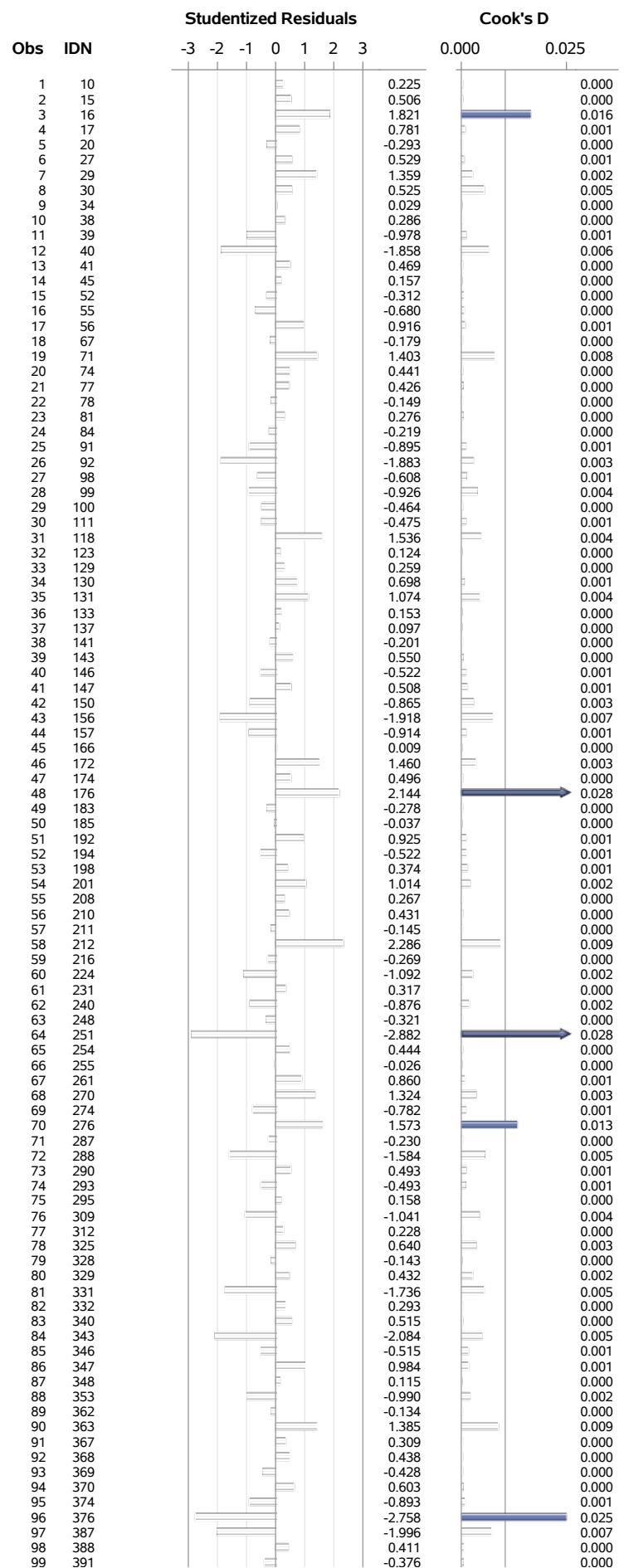
**Log-Log MLR with Dummy and Centered Interactions**

**The REG Procedure**  
**Model: MODEL1**  
**Dependent Variable: SalePrice\_I**

Output Statistics										
Obs	Id	Dependent Variable	Predicted Value	Std Error Mean Predict	95% CL Mean		Residual	Std Error Residual	Student Residual	Cook's D
353	1353	11.8	11.7077	0.0254	11.6579	11.7576	0.1046	0.191	0.549	0.001
354	1357	11.6	11.7062	0.0201	11.6666	11.7458	-0.0980	0.191	-0.512	0.000
355	1358	11.9	11.7958	0.0146	11.7671	11.8244	0.1219	0.192	0.636	0.000
356	1363	11.6	12.0217	0.0195	11.9833	12.0602	-0.4610	0.191	-2.410	0.010
357	1372	12.0	12.0003	0.0180	11.9648	12.0358	0.0164	0.191	0.086	0.000
358	1378	11.7	11.8418	0.0238	11.7949	11.8886	-0.1719	0.191	-0.901	0.002
359	1381	11.0	11.5203	0.0284	11.4645	11.5761	-0.5435	0.190	-2.858	0.030
360	1382	12.4	12.1150	0.0270	12.0620	12.1680	0.2629	0.190	1.381	0.006
361	1385	11.6	11.7155	0.0192	11.6777	11.7533	-0.1538	0.191	-0.804	0.001
362	1390	11.8	11.7365	0.0257	11.6859	11.7871	0.0465	0.191	0.244	0.000
363	1392	11.7	11.9778	0.0166	11.9452	12.0105	-0.2498	0.192	-1.304	0.002
364	1393	11.7	11.7104	0.0198	11.6714	11.7494	0.009519	0.191	0.050	0.000
365	1398	11.8	11.9143	0.0325	11.8503	11.9782	-0.0829	0.190	-0.437	0.001
366	1399	11.8	12.0649	0.0228	12.0200	12.1098	-0.2299	0.191	-1.204	0.003
367	1401	11.7	11.6951	0.0253	11.6454	11.7448	0.000160	0.191	0.001	0.000
368	1412	11.8	12.0023	0.0182	11.9665	12.0380	-0.1529	0.191	-0.799	0.001
369	1413	11.4	11.7788	0.0154	11.7485	11.8091	-0.3712	0.192	-1.937	0.004
370	1415	12.2	12.0782	0.0430	11.9936	12.1628	0.1623	0.187	0.866	0.007
371	1419	11.7	11.8239	0.0135	11.7973	11.8504	-0.0959	0.192	-0.500	0.000
372	1424	12.5	12.0062	0.0373	11.9329	12.0795	0.5182	0.189	2.747	0.049
373	1425	11.9	11.9001	0.0132	11.8742	11.9260	-0.0225	0.192	-0.118	0.000
374	1426	11.9	11.8666	0.0128	11.8414	11.8918	-0.002985	0.192	-0.016	0.000
375	1428	11.8	11.9700	0.0161	11.9383	12.0017	-0.1206	0.192	-0.629	0.000
376	1436	12.1	11.9636	0.0158	11.9326	11.9946	0.1032	0.192	0.539	0.000
377	1437	11.7	11.6911	0.0213	11.6493	11.7330	0.008294	0.191	0.043	0.000
378	1444	11.7	11.5345	0.0283	11.4790	11.5901	0.1690	0.190	0.889	0.003
379	1449	11.6	11.7507	0.0197	11.7120	11.7893	-0.1244	0.191	-0.650	0.001
380	1451	11.8	12.0362	0.0206	11.9956	12.0767	-0.2158	0.191	-1.129	0.002
381	1453	11.9	11.6324	0.0211	11.5909	11.6739	0.2521	0.191	1.319	0.004
382	1459	11.9	11.7958	0.0146	11.7671	11.8244	0.0687	0.192	0.358	0.000
383	1460	11.9	11.7147	0.0192	11.6769	11.7525	0.1869	0.191	0.977	0.002

**Log-Log MLR with Dummy and Centered Interactions****The REG Procedure****Model: MODEL1****Dependent Variable: SalePrice\_I**

### Studentized Residuals and Cook's D for SalePrice\_I



## Log-Log MLR with Dummy and Centered Interactions

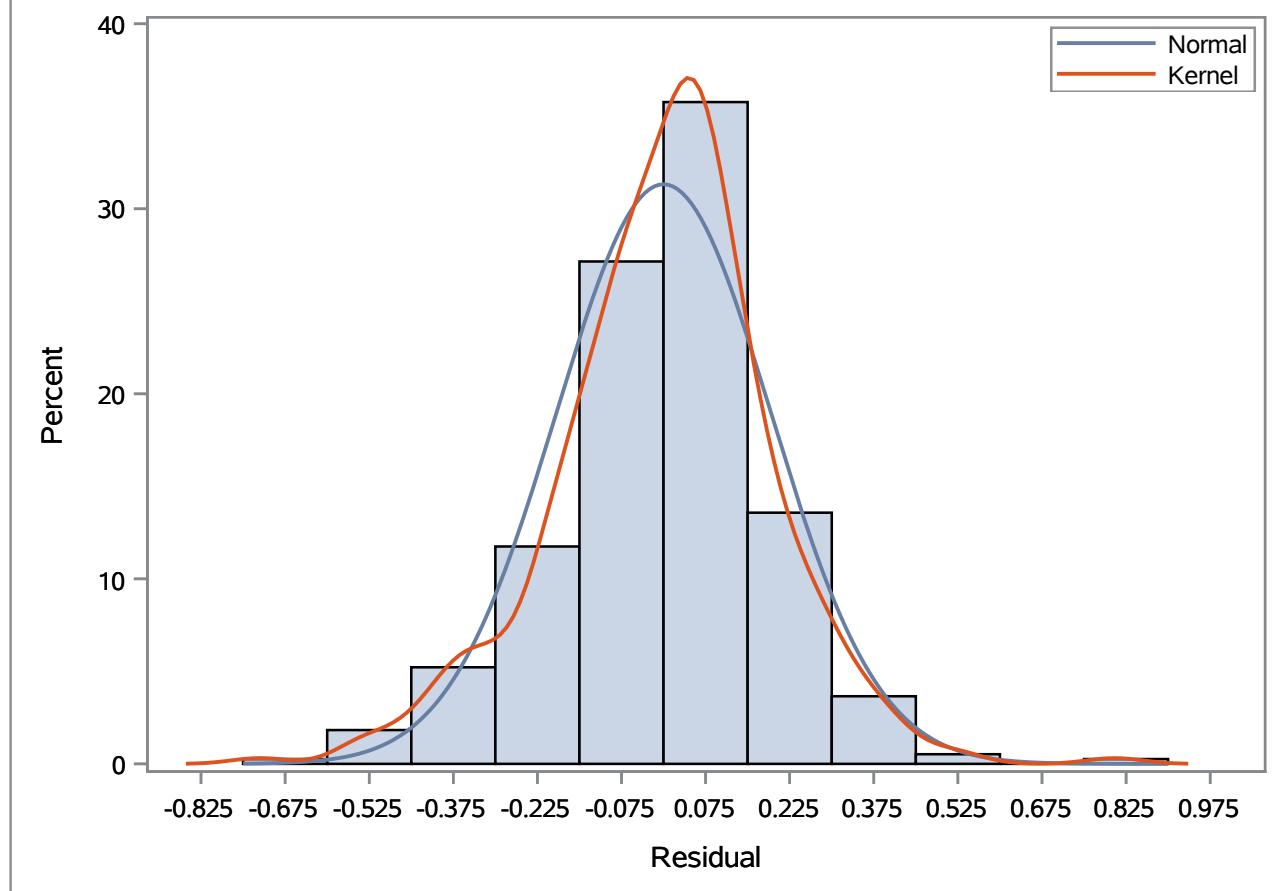
**The REG Procedure**

Model: MODEL1

Dependent Variable: SalePrice\_I

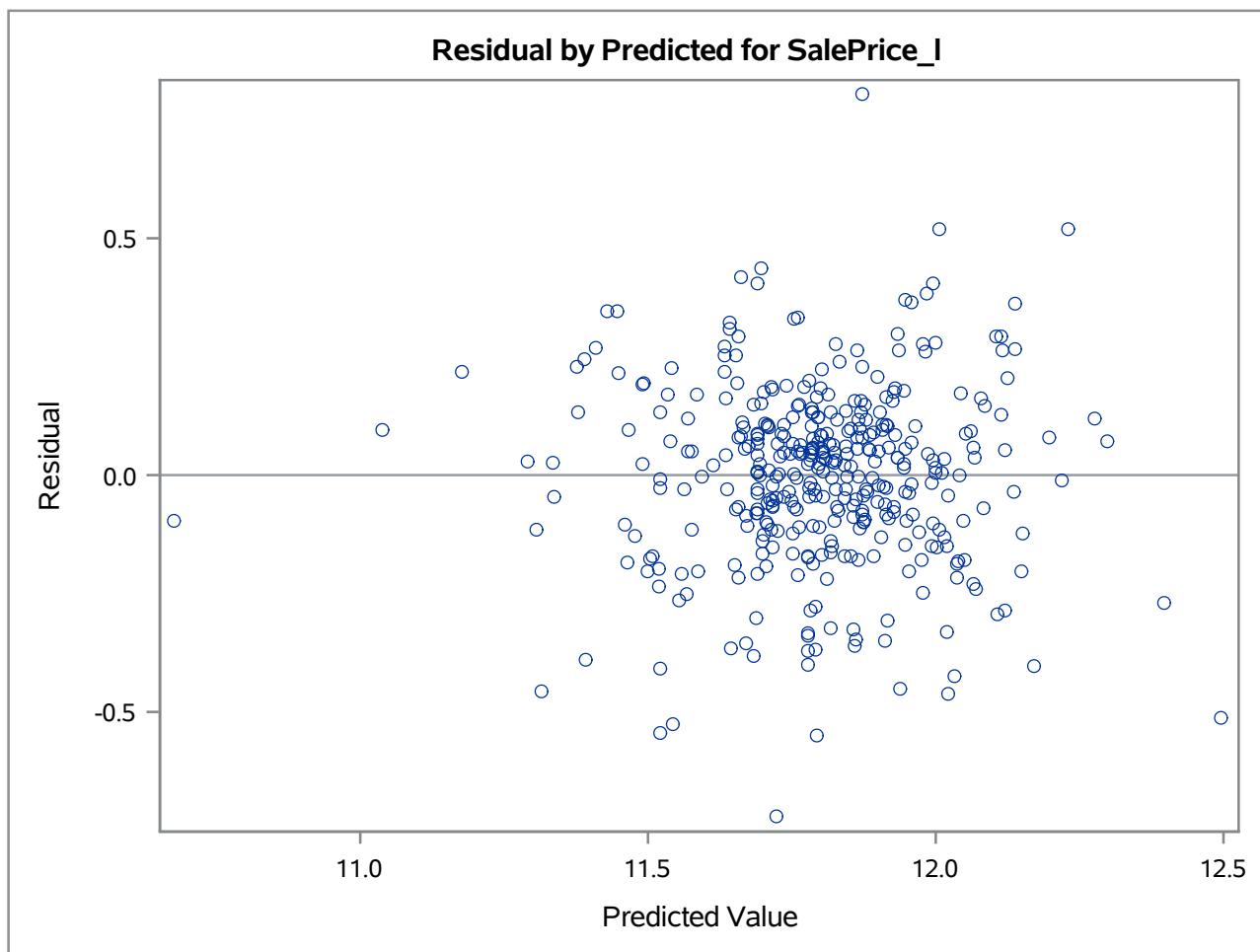
<b>Sum of Residuals</b>	-4.2443E-12
<b>Sum of Squared Residuals</b>	13.93775
<b>Predicted Residual SS (PRESS)</b>	14.60908

**Distribution of Residuals for SalePrice\_I**



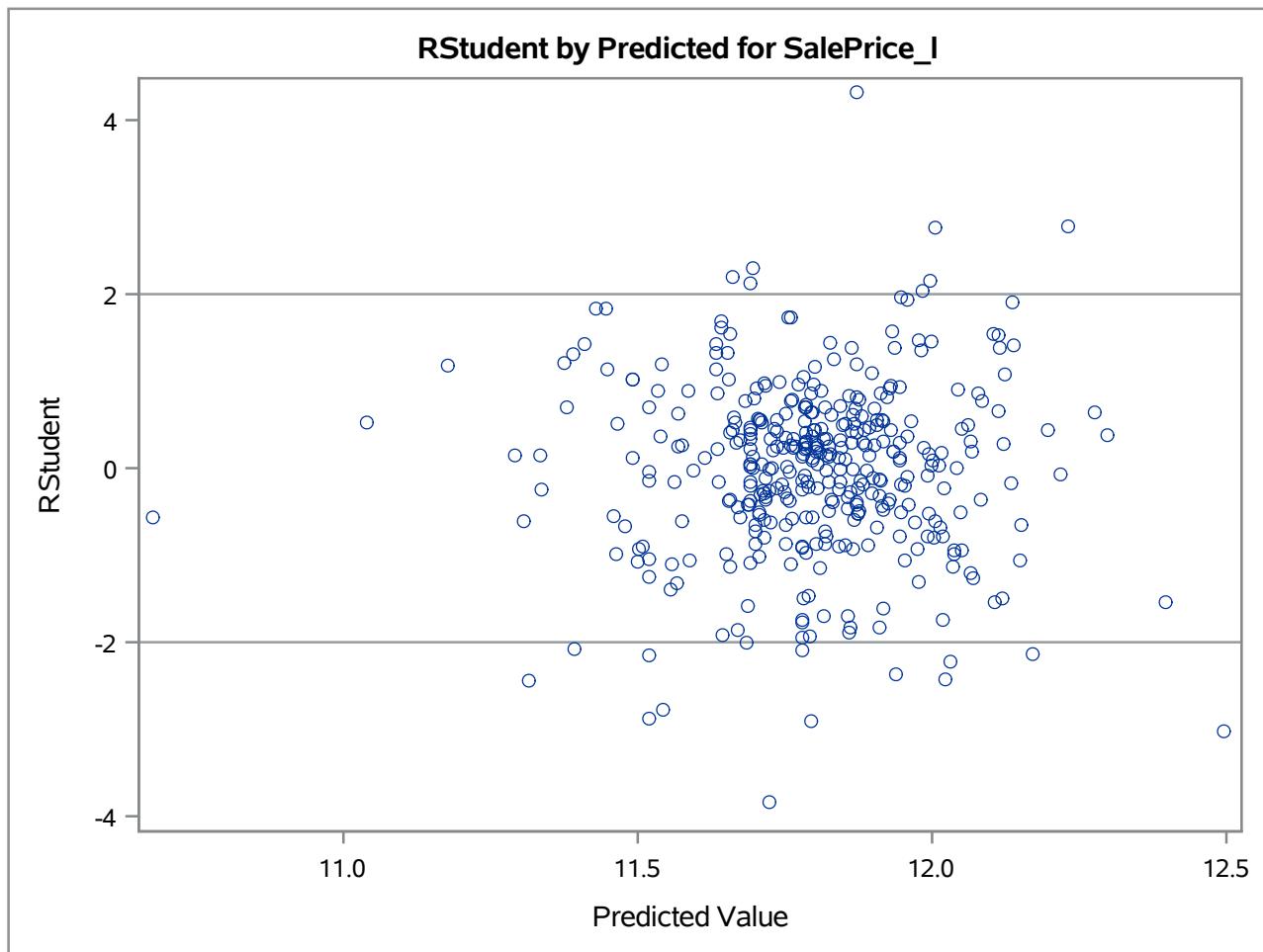
**Log-Log MLR with Dummy and Centered Interactions**

The REG Procedure  
Model: MODEL1



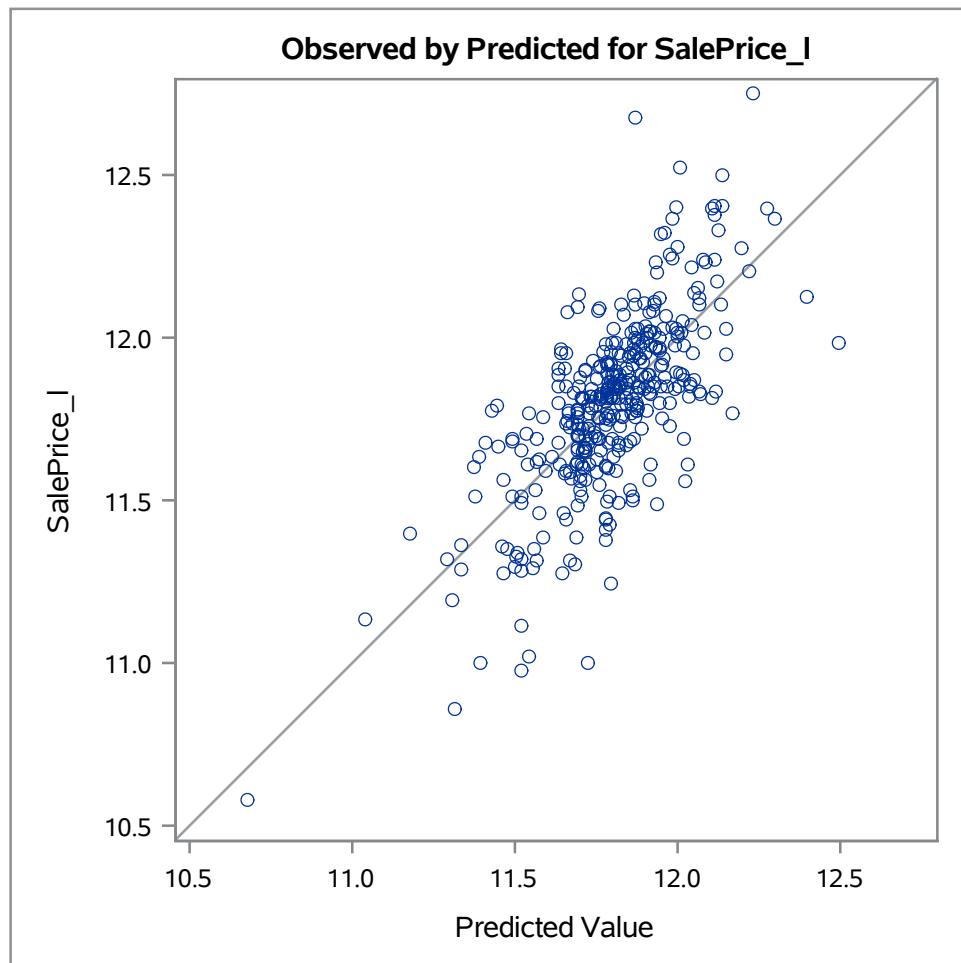
**Log-Log MLR with Dummy and Centered Interactions**

The REG Procedure  
Model: MODEL1



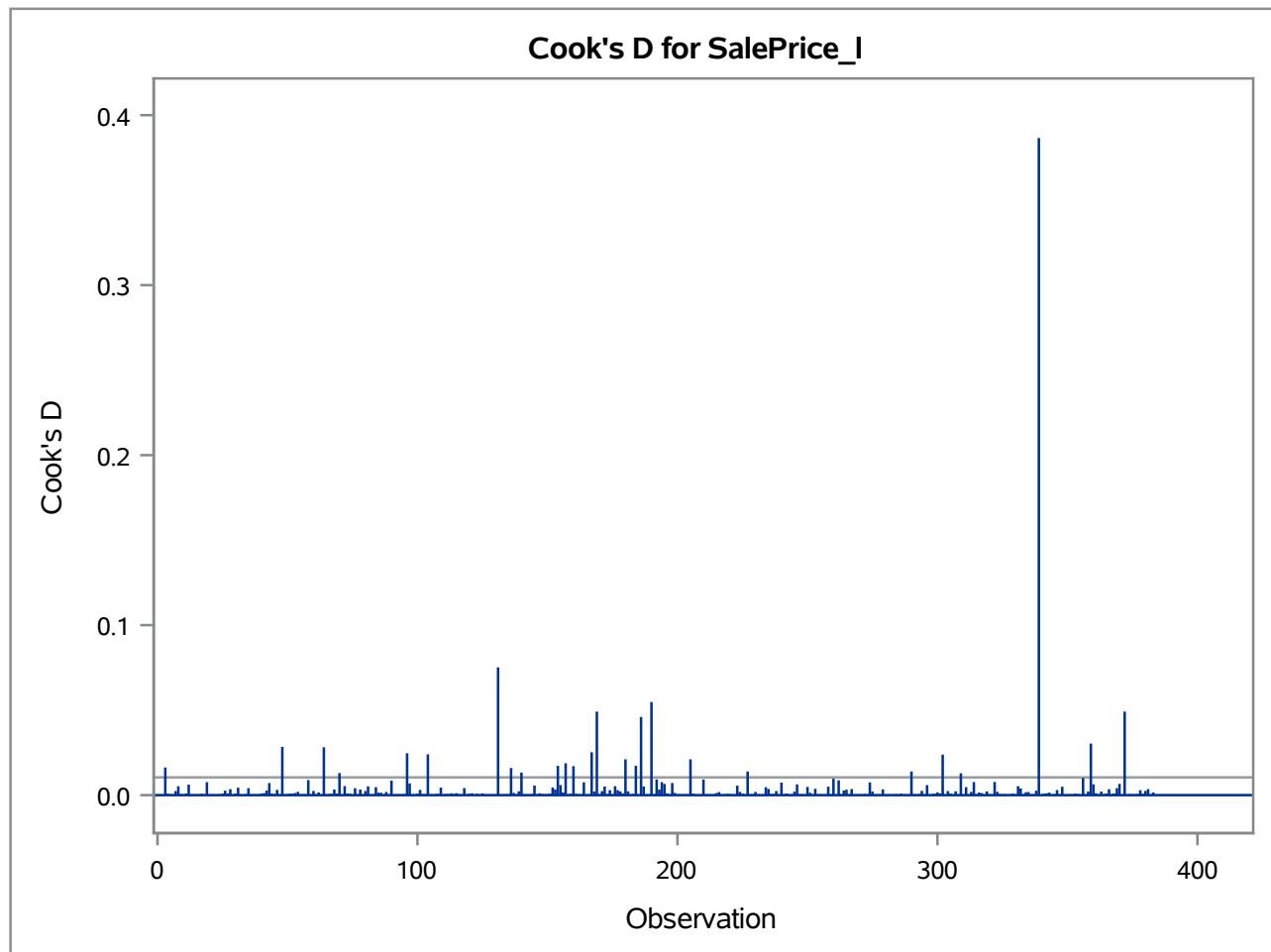
**Log-Log MLR with Dummy and Centered Interactions**

The REG Procedure  
Model: MODEL1



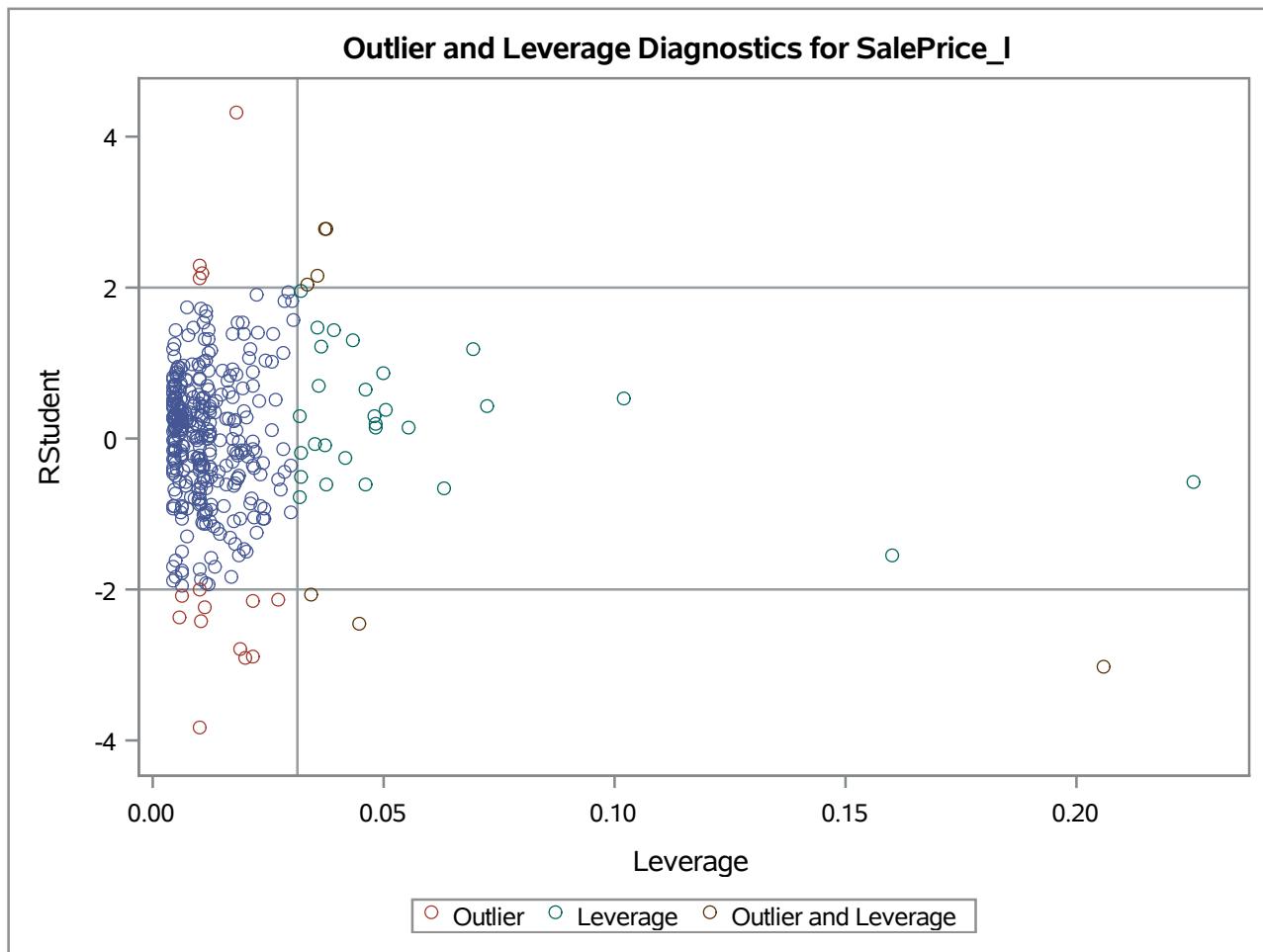
**Log-Log MLR with Dummy and Centered Interactions**

The REG Procedure  
Model: MODEL1



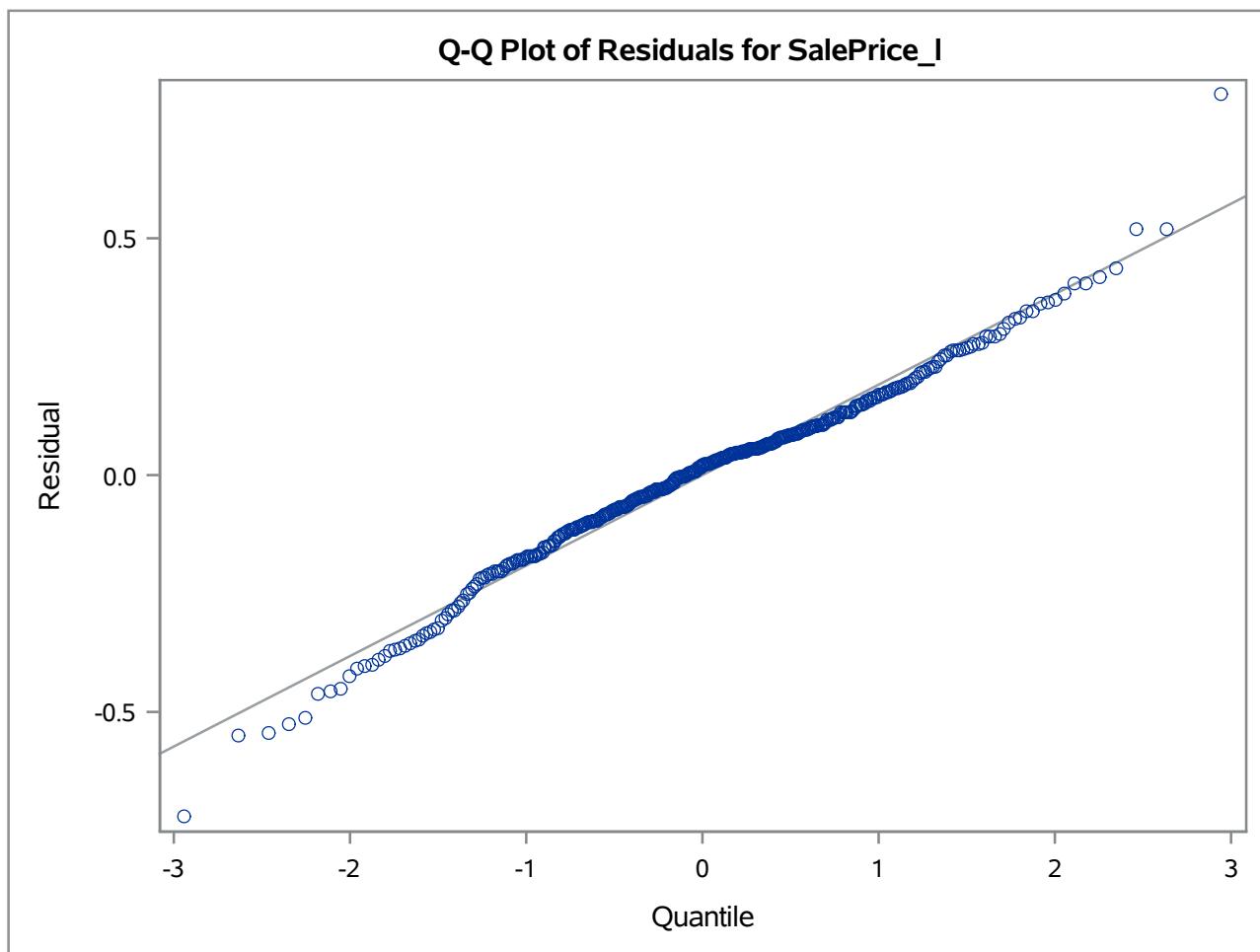
**Log-Log MLR with Dummy and Centered Interactions**

The REG Procedure  
Model: MODEL1



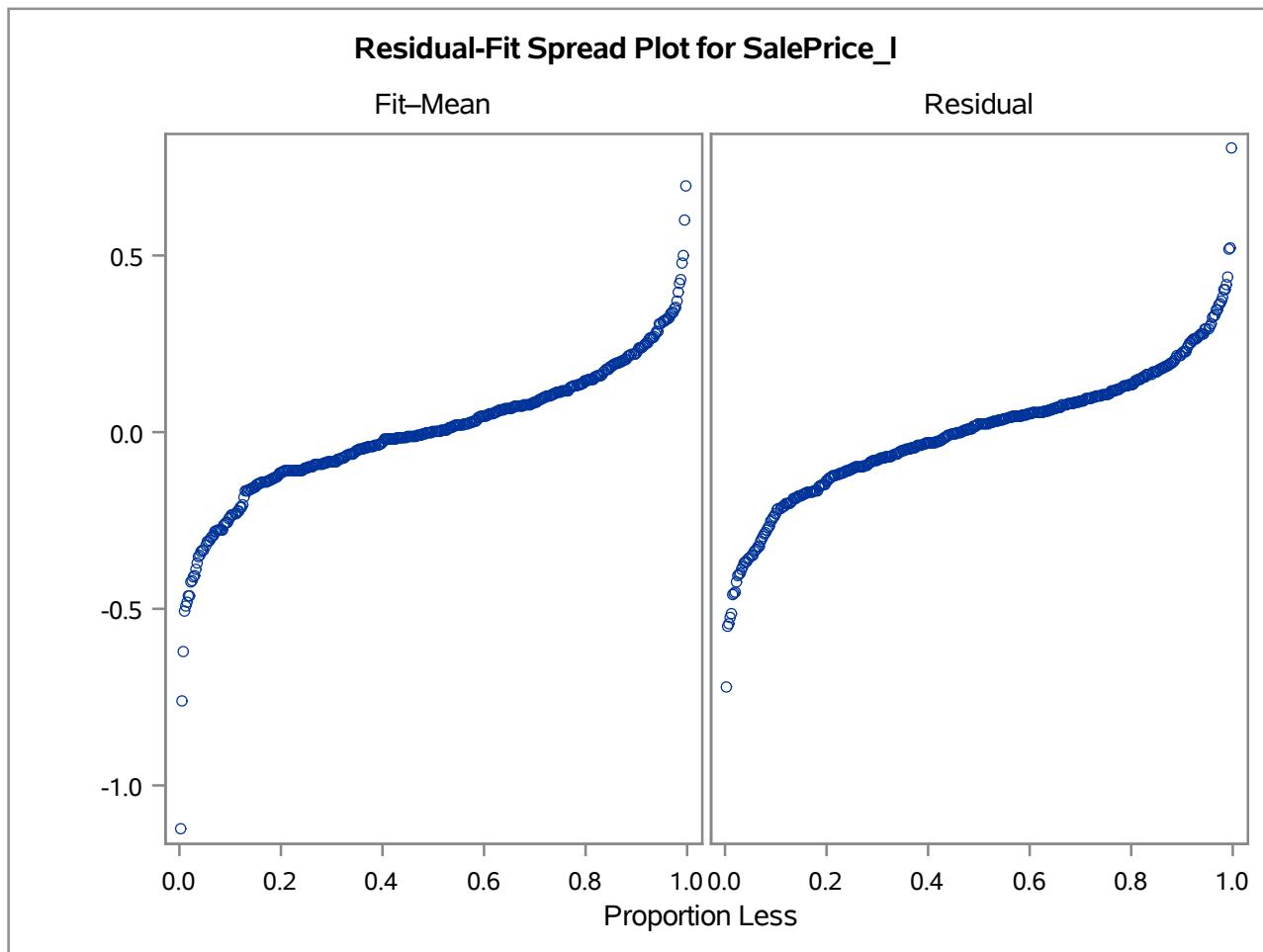
**Log-Log MLR with Dummy and Centered Interactions**

The REG Procedure  
Model: MODEL1



**Log-Log MLR with Dummy and Centered Interactions**

The REG Procedure  
Model: MODEL1



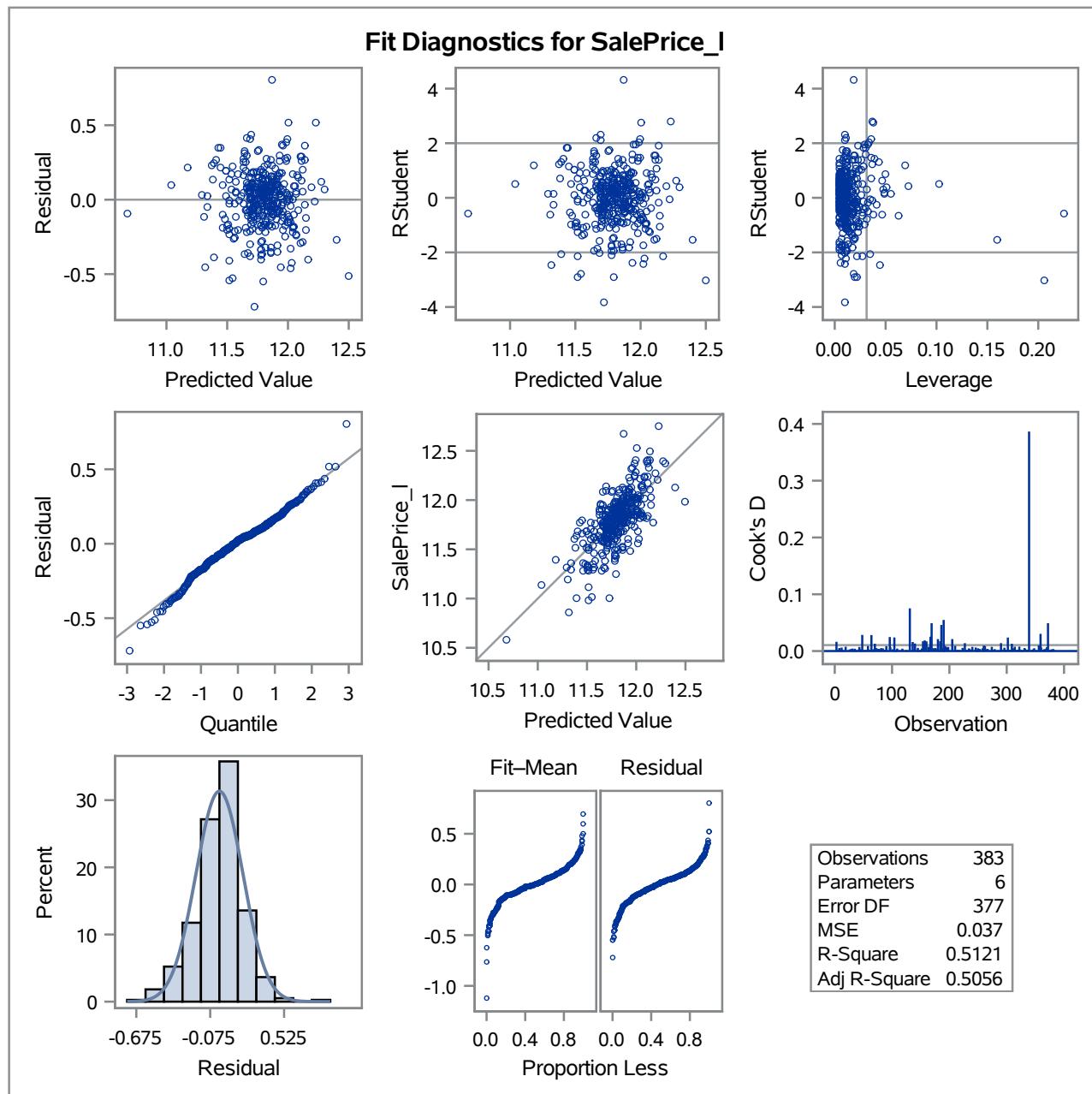
**Log-Log MLR with Dummy and Centered Interactions**

The REG Procedure  
Model: MODEL1



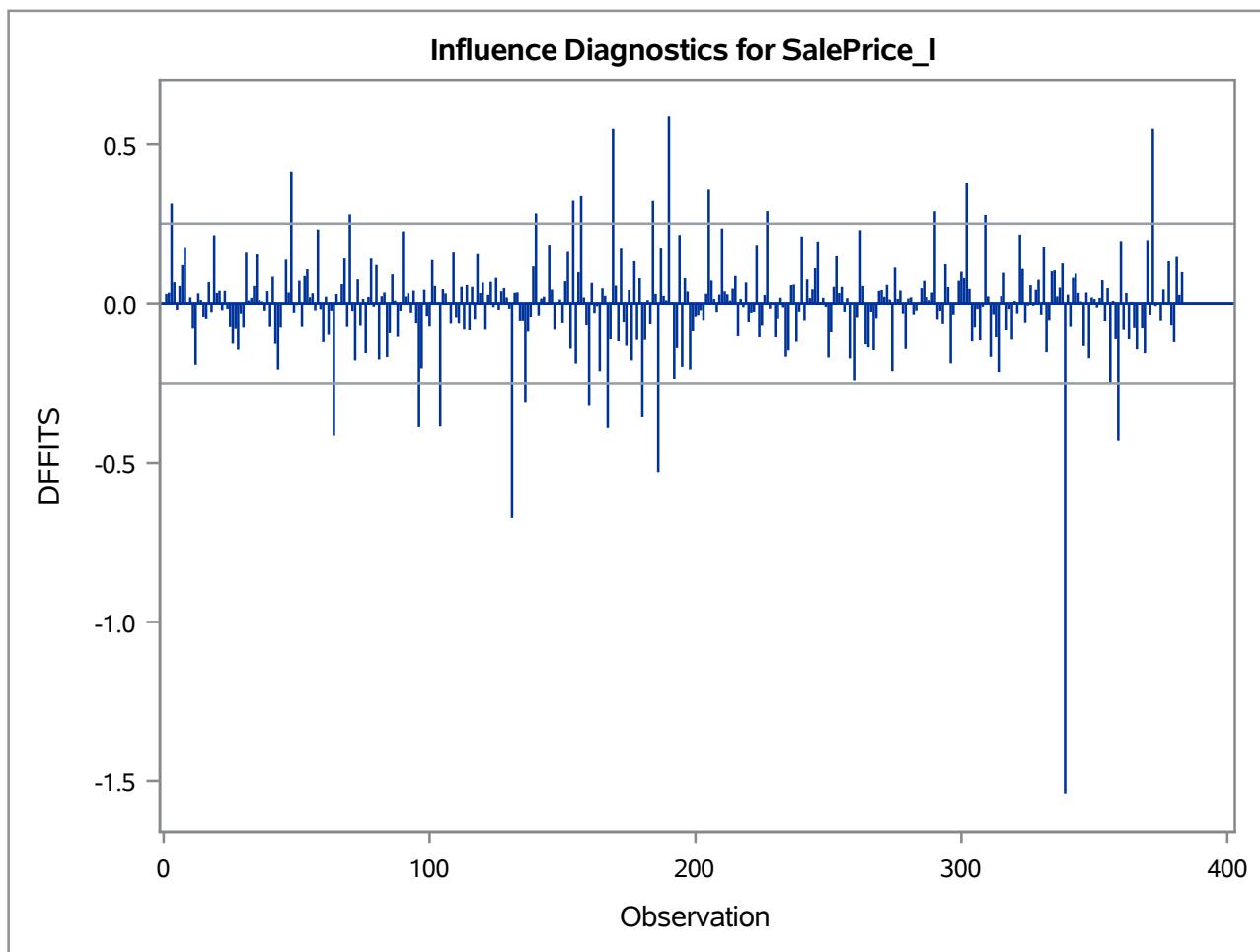
## Log-Log MLR with Dummy and Centered Interactions

**The REG Procedure**  
**Model: MODEL1**



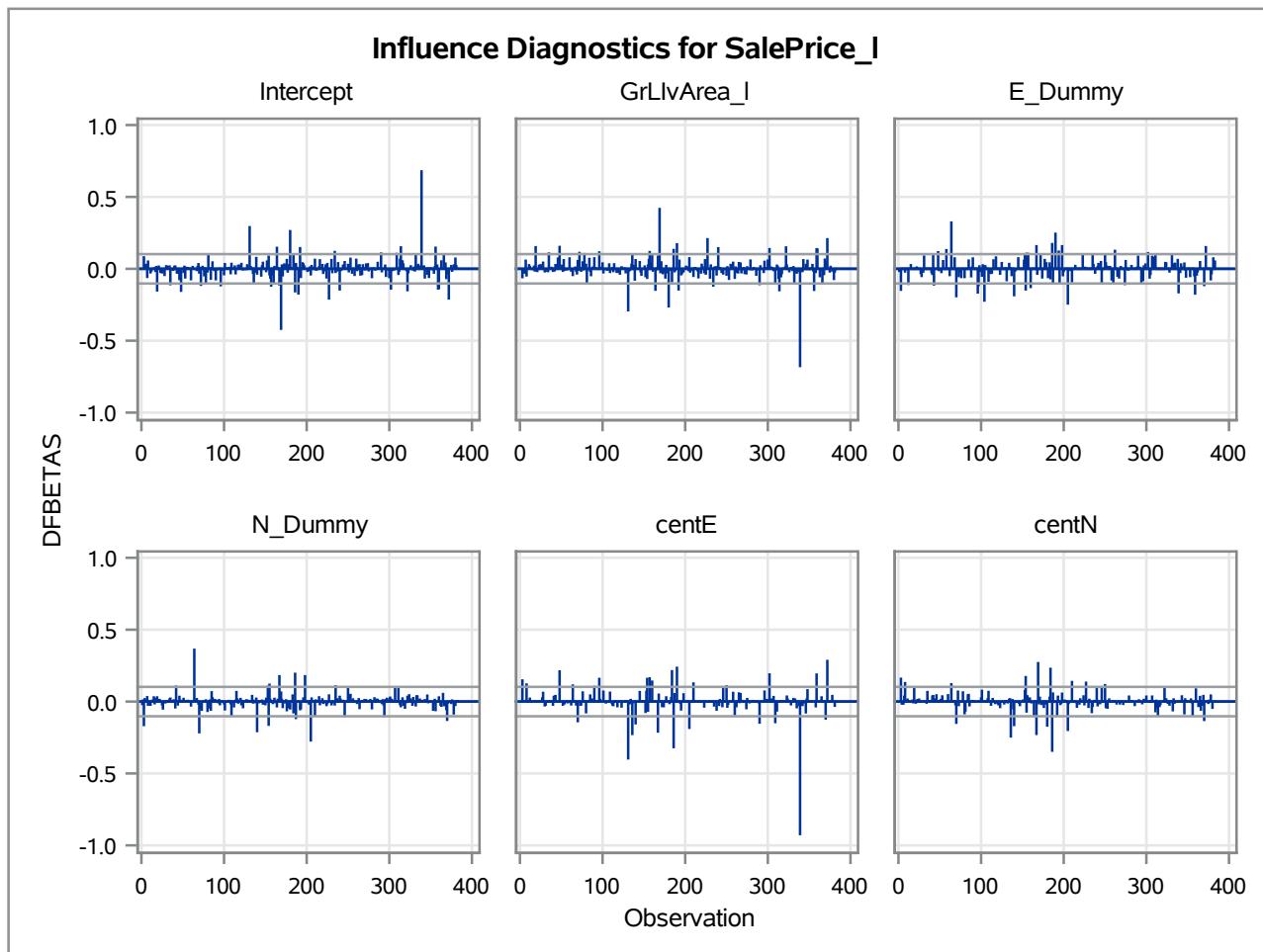
**Log-Log MLR with Dummy and Centered Interactions**

The REG Procedure  
Model: MODEL1



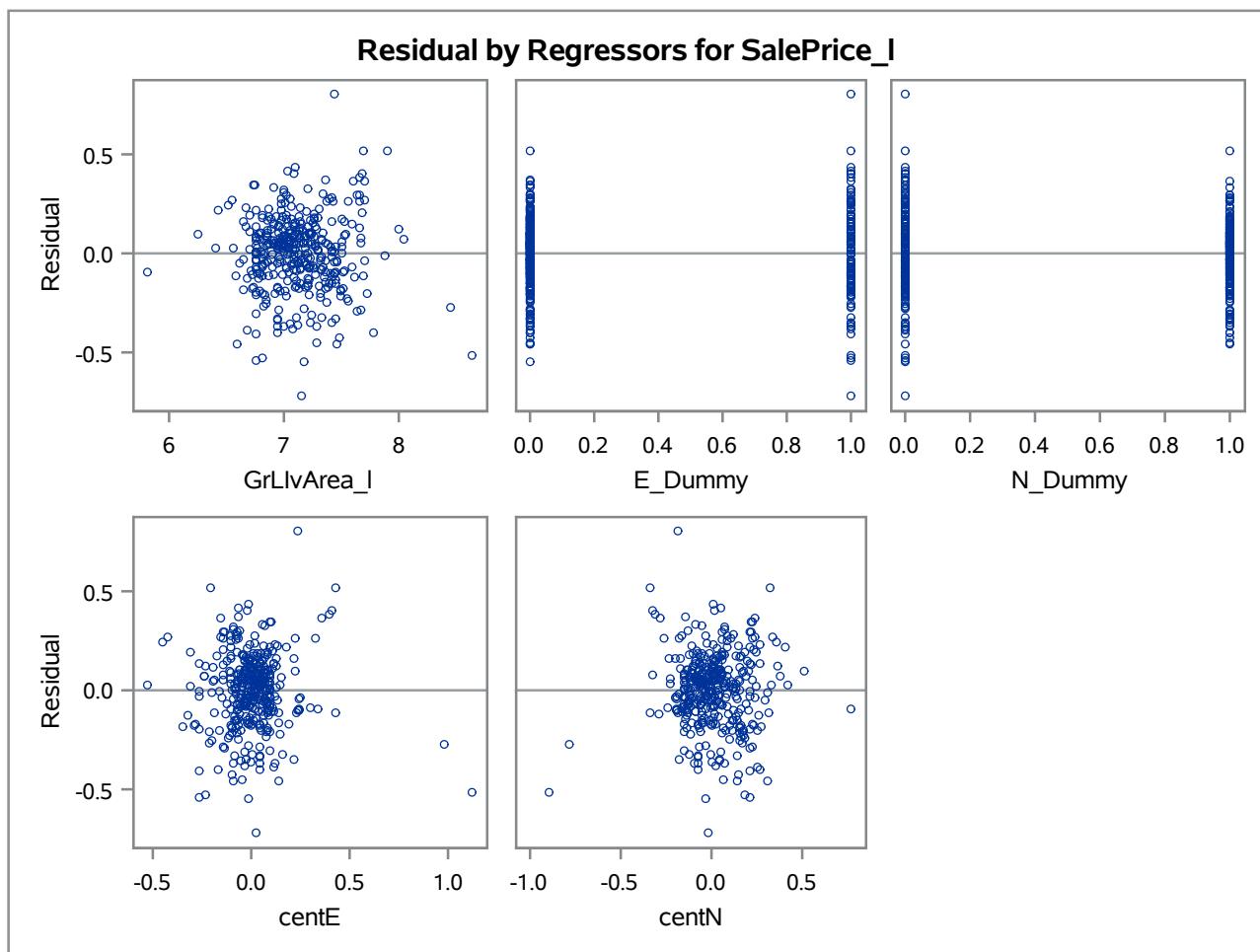
**Log-Log MLR with Dummy and Centered Interactions**

The REG Procedure  
Model: MODEL1



**Log-Log MLR with Dummy and Centered Interactions**

The REG Procedure  
Model: MODEL1



## The GLMSELECT Procedure

Data Set	WORK.TRAIN_6
Dependent Variable	SalePrice_I
Selection Method	Stepwise
Select Criterion	Significance Level
Stop Criterion	Significance Level
Choose Criterion	Cross Validation
Entry Significance Level (SLE)	0.15
Stay Significance Level (SLS)	0.15
Cross Validation Method	Split
Cross Validation Fold	5
Effect Hierarchy Enforced	Single

Number of Observations Read	1460
Number of Observations Used	1452

Class Level Information		
Class	Levels	Values
LotConfig	5	Corner CulDSac FR2 FR3 Inside
BldgType	5	1Fam 2fmCon Duplex Twnhs TwnhsE
HouseStyle	8	1.5Fin 1.5Unf 1Story 2.5Fin 2.5Unf 2Story SFoyer SLvl

Dimensions	
Number of Effects	79
Number of Parameters	268

## The GLMSELECT Procedure

Stepwise Selection Summary									
Step	Effect Entered	Effect Removed	Number Effects In	NumberParms In	Model R-Square	PRESS	CV PRESS	F Value	Pr > F
0	Intercept		1	1	0.0000	231.7413	231.7520	0.00	1.0000
1	GrLlvArea_I		2	2	0.5338	108.2539	108.0105	1660.27	<.0001
2	YearBuilt		3	3	0.7152	66.2858	66.1688	923.15	<.0001
3	OverallCond		4	4	0.7585	56.2813	56.1909	259.37	<.0001
4	TotalBsmtSF		5	5	0.7987	48.1391	47.7174	288.66	<.0001
5	GarageCars		6	6	0.8193	43.2619	42.7619	165.58	<.0001
6	Fireplaces		7	7	0.8293	40.9988	40.5333	84.23	<.0001
7	GrLlvArea*TotalBsmtS		8	8	0.8374	42.5758	41.2275	72.05	<.0001
8	GrLlvArea*GarageCars		9	9	0.8446	39.6681	38.8164	66.68	<.0001
9	BldgType		10	13	0.8515	38.4791	37.8080	16.77	<.0001
10	OverallCon*YearBuilt		11	14	0.8564	37.4904	36.6067	49.39	<.0001
11	GarageCars*BldgType		12	18	0.8598	36.5759	35.7486	8.50	<.0001
12	LotArea		13	19	0.8622	36.0785	35.0199	24.96	<.0001
13	LotArea*TotalBsmtSF		14	20	0.8677	34.6398	34.3765	59.67	<.0001
14	LotArea*BldgType		15	24	0.8705	35.3676	36.1535	7.64	<.0001
15	YearBuilt*GarageCars		16	25	0.8723	34.1876	35.3079	20.81	<.0001
16	GrLlvArea_I*BldgType		17	29	0.8744	33.7030	34.6511	5.88	0.0001
17	GrLlvArea*Fireplaces		18	30	0.8753	33.6894	34.6048	10.06	0.0015
18	YearBuilt*Fireplaces		19	31	0.8762	33.6243	34.5685	10.71	0.0011
19	LotArea*OverallCond		20	32	0.8770	32.6085	32.9927	8.95	0.0028
20	MasVnrArea		21	33	0.8777	32.4870	32.9503	7.82	0.0052
21	YearBuilt*MasVnrArea		22	34	0.8798	31.9990	32.3638	25.60	<.0001
22	LotArea*MasVnrArea		23	35	0.8804	31.8657	33.0916	7.09	0.0078
23	TotalBsmtSF*BldgType		24	39	0.8814	31.6064	32.7742	2.94	0.0196
24	HouseStyle		25	46	0.8826	31.8251	33.2271	2.11	0.0401
25	LotArea*HouseStyle		26	53	0.8840	30.8112	32.2177	2.39	0.0196
26	LotArea*OverallCond		25	52	0.8840	30.6752	31.8846	0.00	0.9495
27	LotArea*MasVnrArea		24	51	0.8839	30.3569	30.9245	1.01	0.3149
28	YearBuilt*TotalBsmtS		25	52	0.8845	30.3918	30.8383	6.41	0.0115
29	GrLlvArea*HouseStyle		26	59	0.8863	29.9452	30.3767	3.14	0.0027
30	MasVnrAre*TotalBsmtS		27	60	0.8867	29.6586*	30.2084*	5.26	0.0220
31	TotalBsmt*Fireplaces		28	61	0.8873	30.4285	30.6471	7.71	0.0056
32	MasVnrAre*HouseStyle		29	65	0.8881	30.4410	30.9851	2.31	0.0559
33	GrLlvArea*MasVnrArea		30	66	0.8884	30.1878	30.7333	3.88	0.0490

\* Optimal Value of Criterion

## The GLMSELECT Procedure

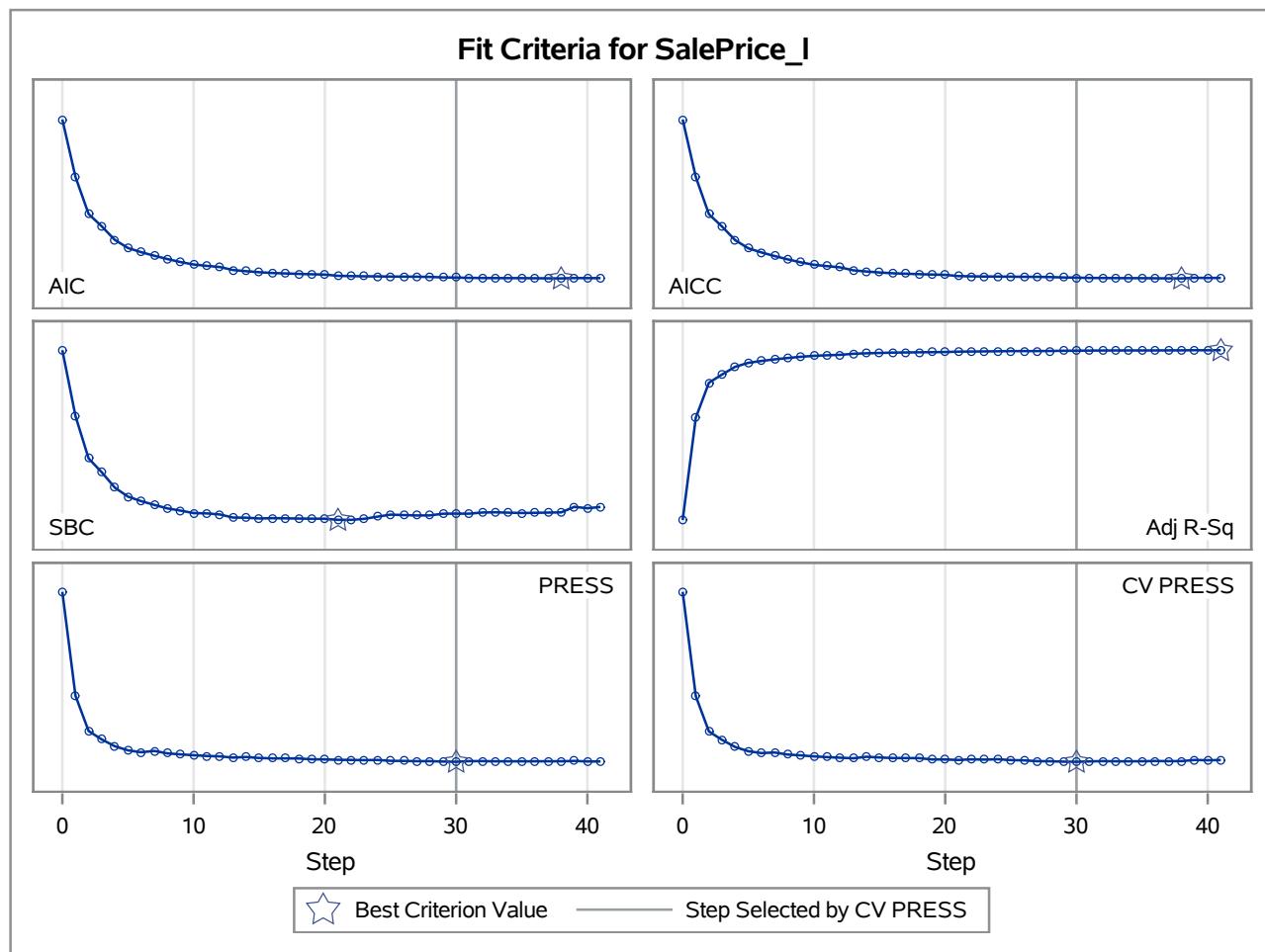
Stepwise Selection Summary									
Step	Effect Entered	Effect Removed	Number Effects In	NumberParms In	Model R-Square	PRESS	CV PRESS	F Value	Pr > F
34		GrLlvArea*GarageCars	29	65	0.8883	30.2142	30.7689	1.21	0.2719
35		GrLlvArea*Fireplaces	28	64	0.8882	30.2256	30.8274	1.45	0.2294
36	LotArea*GarageCars		29	65	0.8885	30.2319	31.1388	3.94	0.0475
37	GrLlvArea*OverallCon		30	66	0.8887	30.2605	30.9216	3.34	0.0679
38	OverallCo*Fireplaces		31	67	0.8890	30.2414	31.0363	3.32	0.0688
39	BldgType*HouseStyle		32	83	0.8909	30.6517	32.3585	1.45	0.1099
40		LotArea*BldgType	31	79	0.8904	30.0717	32.0215	1.47	0.2083
41	YearBuilt*BldgType		32	83	0.8910	30.0667	32.3019	1.96	0.0978

\* Optimal Value of Criterion

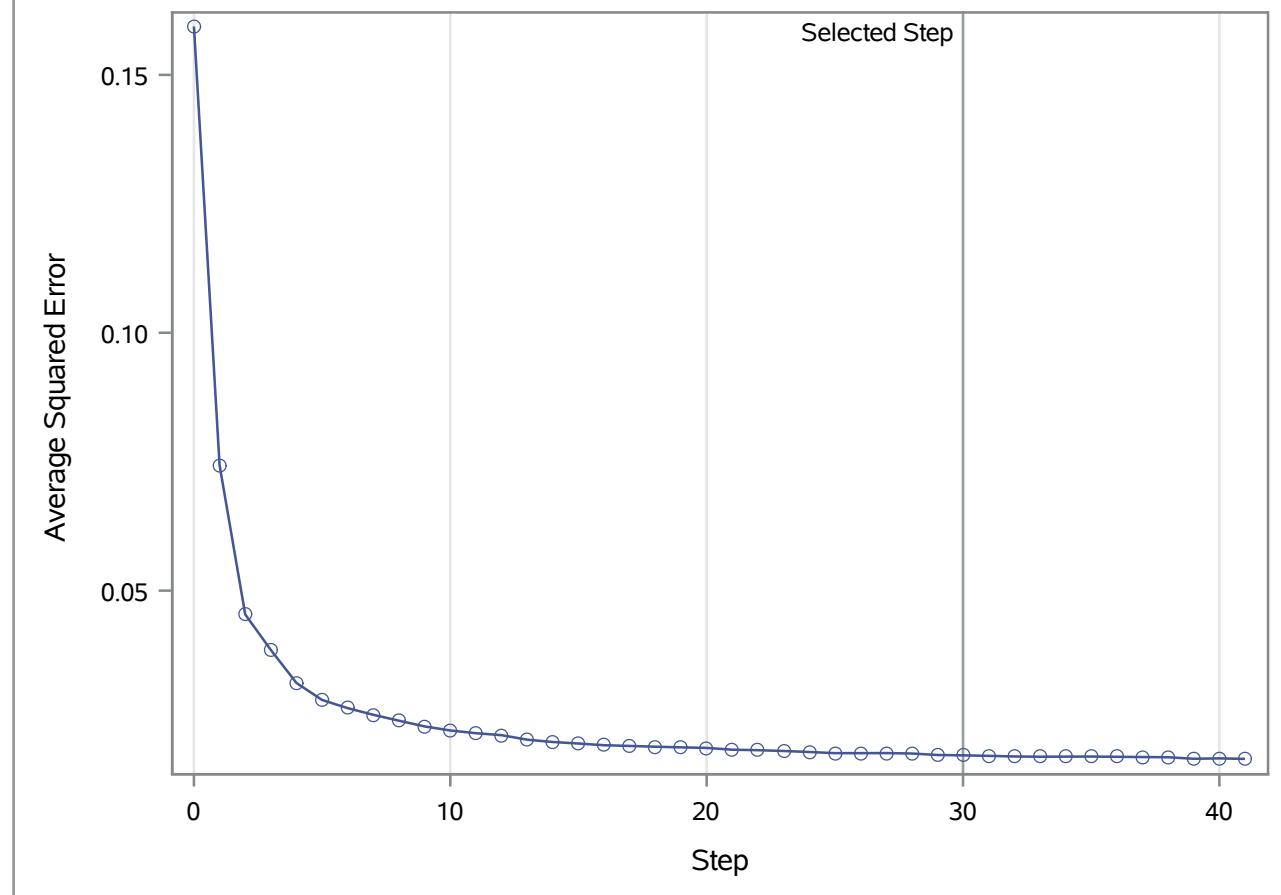
Selection stopped because the candidate for entry has SLE > 0.15 and the candidate for removal has SLS < 0.15.

Stop Details					
Candidate For	Effect	Candidate Significance		Compare Significance	
Entry	MasVnrAre*GarageCars	0.1537	>	0.1500	(SLE)
Removal	YearBuilt*BldgType	0.0978	<	0.1500	(SLS)

## The GLMSELECT Procedure



## The GLMSELECT Procedure

**Progression of Average Squared Errors for SalePrice\_I**

**The GLMSELECT Procedure**  
**Selected Model**

**The selected model, based on Cross Validation, is the model at Step 30.**

<b>Effects:</b>	Intercept GrLlvArea_I LotArea OverallCond YearBuilt OverallCon*YearBuilt MasVnrArea YearBuilt*MasVnrArea TotalBsmtSF GrLlvArea*TotalBsmtS LotArea*TotalBsmtSF YearBuilt*TotalBsmtS MasVnrAre*TotalBsmtS Fireplaces GrLlvArea*Fireplaces YearBuilt*Fireplaces BldgType GrLlvArea_I*BldgType LotArea*BldgType TotalBsmtSF*BldgType HouseStyle GrLlvArea*HouseStyle LotArea*HouseStyle GarageCars GrLlvArea*GarageCars YearBuilt*GarageCars GarageCars*BldgType
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Analysis of Variance				
Source	DF	Sum of Squares	Mean Square	F Value
<b>Model</b>	59	205.20111	3.47798	184.64
<b>Error</b>	1392	26.22110	0.01884	
<b>Corrected Total</b>	1451	231.42221		

<b>Root MSE</b>	0.13725
<b>Dependent Mean</b>	12.02239
<b>R-Square</b>	0.8867
<b>Adj R-Sq</b>	0.8819
<b>AIC</b>	-4254.52099
<b>AICC</b>	-4249.07926
<b>PRESS</b>	29.65861
<b>SBC</b>	-5391.67915
<b>CV PRESS</b>	30.20836

Cross Validation Details			
Index	Observations		CV PRESS
	Fitted	Left Out	
1	1161	291	6.2804
2	1161	291	5.8660
3	1162	290	6.3536
4	1162	290	5.3297
5	1162	290	6.3788
Total			30.2084

**The GLMSELECT Procedure**  
**Selected Model**

Parameter Estimates									
Parameter	DF	Estimate	Standard Error	t Value	Cross Validation Estimates				
					1	2	3	4	5
Intercept	1	-2.723117	2.003442	-1.36	-1.15E+01	-1.13E+01	-9.41E+00	-9.43E+00	-7.86E+00
GrLlvArea_I	1	0.227061	0.114207	1.99	4.61E-01	3.55E-01	2.02E-01	2.48E-01	2.10E-02
LotArea	1	0.000038833	0.000008674	4.48	8.38E-06	1.81E-05	1.73E-05	2.21E-05	1.29E-05
OverallCond	1	1.483282	0.254059	5.84	1.98E+00	1.67E+00	1.60E+00	1.88E+00	1.77E+00
YearBuilt	1	0.006056	0.000951	6.37	9.76E-03	9.98E-03	9.58E-03	9.45E-03	9.41E-03
OverallCon*YearBuilt	1	-0.000723	0.000130	-5.54	-8.61E-04	-6.95E-04	-6.92E-04	-8.46E-04	-7.57E-04
MasVnrArea	1	-0.011980	0.002384	-5.02	-1.91E-02	-1.91E-02	-1.47E-02	-1.68E-02	-1.81E-02
YearBuilt*MasVnrArea	1	0.000006129	0.000001208	5.07	8.77E-06	8.61E-06	6.76E-06	8.47E-06	8.01E-06
TotalBsmtSF	1	-0.002463	0.000974	-2.53	-2.08E-03	-1.69E-03	-2.11E-03	-2.41E-03	-1.76E-03
GrLlvArea*TotalBsmtS	1	-0.000087622	0.000035176	-2.49	-1.36E-04	-1.68E-04	-1.11E-05	-3.10E-05	-1.20E-04
LotArea*TotalBsmtSF	1	-6.931356E-9	8.599561E-10	-8.06	-7.31E-09	-6.53E-09	-9.14E-09	-8.69E-09	-6.57E-09
YearBuilt*TotalBsmtS	1	0.000001780	0.000000514	3.46	1.80E-06	1.79E-06	1.42E-06	1.64E-06	1.74E-06
MasVnrAre*TotalBsmtS	1	-0.000000104	4.5266795E-8	-2.29	-2.78E-07	-3.05E-07	-1.64E-07	-3.48E-07	-3.51E-07
Fireplaces	1	1.528772	0.491937	3.11	2.34E+00	2.08E+00	2.01E+00	2.41E+00	1.63E+00
GrLlvArea*Fireplaces	1	0.061453	0.022485	2.73	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
YearBuilt*Fireplaces	1	-0.000980	0.000244	-4.02	-1.27E-03	-1.12E-03	-1.04E-03	-1.26E-03	-8.97E-04
BldgType 1Fam	1	-0.656258	0.492907	-1.33	3.15E+00	5.33E+00	4.05E+00	2.77E+00	2.88E+00
BldgType 2fmCon	1	-0.261310	0.781260	-0.33	7.53E+00	1.05E+01	6.15E+00	1.40E+01	1.13E+01
BldgType Duplex	1	0.953535	0.707931	1.35	8.48E+00	8.74E+00	5.69E+00	9.45E-01	6.72E+00
BldgType Twnhs	1	-0.575490	1.058496	-0.54	7.71E+00	6.89E+00	4.67E+00	6.28E+00	1.83E+00
GrLlvArea_I*BldgType 1Fam	1	0.121470	0.074058	1.64	2.56E-01	3.07E-01	3.25E-01	2.81E-01	5.70E-01
GrLlvArea_I*BldgType 2fmCon	1	0.053630	0.112154	0.48	3.73E-01	4.97E-01	3.38E-01	3.07E-01	6.74E-01
GrLlvArea_I*BldgType Duplex	1	-0.080923	0.103327	-0.78	-2.52E-02	-2.75E-02	-5.02E-02	1.06E-02	2.43E-01
GrLlvArea_I*BldgType Twnhs	1	0.093756	0.159460	0.59	4.90E-02	3.77E-01	1.03E+00	3.90E-01	5.74E-01
LotArea*BldgType 1Fam	1	-0.000019291	0.000006731	-2.87	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LotArea*BldgType 2fmCon	1	-0.000019393	0.000006866	-2.82	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LotArea*BldgType Duplex	1	-0.000026533	0.000009514	-2.79	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LotArea*BldgType Twnhs	1	0.000139	0.000056792	2.45	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
TotalBsmtSF*BldgType 1Fam	1	-0.000114	0.000058321	-1.95	-2.36E-04	-3.56E-04	-3.07E-04	-3.30E-04	-5.56E-04
TotalBsmtSF*BldgType 2fmCon	1	0.000043543	0.000113	0.38	-1.21E-04	-2.83E-04	-3.27E-04	-1.98E-04	-3.64E-04
TotalBsmtSF*BldgType Duplex	1	-0.000171	0.000068401	-2.50	-2.43E-04	-3.62E-04	-3.36E-04	-3.52E-04	-5.52E-04
TotalBsmtSF*BldgType Twnhs	1	-0.000653	0.000224	-2.91	-5.37E-04	-1.07E-03	-1.68E-03	-1.13E-03	-1.38E-03
HouseStyle 1.5Fin	1	-1.999140	0.631416	-3.17	-1.55E+00	-1.39E+00	-1.85E+00	-1.59E+00	-1.91E+00

**The GLMSELECT Procedure**  
**Selected Model**

Parameter Estimates									
Parameter	DF	Estimate	Standard Error	t Value	Cross Validation Estimates				
					1	2	3	4	5
HouseStyle 1.5Unf	1	-0.705176	2.308865	-0.31	-6.97E-01	-1.07E-01	-7.15E-01	-4.62E+00	-1.32E+00
HouseStyle 1Story	1	-0.709673	0.568733	-1.25	-1.40E-01	-7.94E-01	-6.12E-01	-2.67E-01	-1.31E+00
HouseStyle 2.5Fin	1	-2.243883	4.489218	-0.50	7.55E+00	1.94E+00	5.20E+00	-2.27E+00	2.19E+00
HouseStyle 2.5Unf	1	-0.491076	1.715903	-0.29	-7.30E-01	-4.86E+00	-8.61E-01	-1.83E+00	-2.10E+00
HouseStyle 2Story	1	-1.490078	0.589235	-2.53	-1.27E+00	-1.73E+00	-1.91E+00	-1.98E+00	-2.52E+00
HouseStyle SFoyer	1	-0.541316	0.985442	-0.55	9.37E-01	-1.18E+00	-7.20E-01	-1.91E-03	2.47E-01
GrLlvArea*HouseStyle 1.5Fin	1	0.279648	0.089138	3.14	1.82E-01	2.13E-01	2.70E-01	2.13E-01	2.75E-01
GrLlvArea*HouseStyle 1.5Unf	1	0.079030	0.338954	0.23	8.38E-02	-7.68E-02	3.59E-02	5.60E-01	1.69E-01
GrLlvArea*HouseStyle 1Story	1	0.096038	0.081583	1.18	-1.16E-03	8.54E-02	6.75E-02	1.29E-02	1.45E-01
GrLlvArea*HouseStyle 2.5Fin	1	0.278904	0.596909	0.47	-1.00E+00	-3.43E-01	-7.27E-01	2.86E-01	-3.87E-01
GrLlvArea*HouseStyle 2.5Unf	1	0.021281	0.246979	0.09	6.62E-02	5.53E-01	4.07E-02	1.47E-01	1.48E-01
GrLlvArea*HouseStyle 2Story	1	0.213375	0.083424	2.56	1.75E-01	2.50E-01	2.70E-01	2.76E-01	3.58E-01
GrLlvArea*HouseStyle SFoyer	1	0.095101	0.147735	0.64	-1.57E-01	1.60E-01	1.03E-01	-1.73E-02	-9.40E-02
LotArea*HouseStyle 1.5Fin	1	-0.000008635	0.000005465	-1.58	-2.14E-06	-1.15E-05	-1.16E-05	-1.06E-05	-1.17E-05
LotArea*HouseStyle 1.5Unf	1	0.000020097	0.000021643	0.93	3.43E-05	2.44E-05	1.40E-05	2.81E-05	2.13E-05
LotArea*HouseStyle 1Story	1	-0.000003401	0.000005466	-0.62	3.57E-06	-6.57E-06	-8.21E-06	-5.36E-06	-7.00E-06
LotArea*HouseStyle 2.5Fin	1	0.000005668	0.000021696	0.26	6.28E-05	3.38E-05	4.11E-05	4.49E-06	3.85E-05
LotArea*HouseStyle 2.5Unf	1	0.000040366	0.000025852	1.56	3.98E-05	1.56E-05	3.27E-05	2.07E-05	5.05E-05
LotArea*HouseStyle 2Story	1	-0.000008604	0.000005546	-1.55	-6.77E-07	-1.24E-05	-1.19E-05	-1.18E-05	-1.34E-05
LotArea*HouseStyle SFoyer	1	-0.000015673	0.000011217	-1.40	-1.25E-05	-3.83E-05	-2.52E-05	-3.01E-05	-2.01E-05
GarageCars	1	-1.539538	0.411911	-3.74	-7.88E-01	-1.07E+00	-1.24E+00	-1.17E+00	-1.56E+00
GrLlvArea*GarageCars	1	0.030968	0.017656	1.75	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
YearBuilt*GarageCars	1	0.000712	0.000206	3.45	4.18E-04	5.37E-04	6.31E-04	5.87E-04	7.87E-04
GarageCars*BldgType 1Fam	1	-0.006707	0.037314	-0.18	1.38E-02	6.92E-02	2.98E-02	7.89E-02	4.07E-02
GarageCars*BldgType 2fmCon	1	-0.076429	0.048728	-1.57	-1.50E-01	-5.88E-02	-9.20E-02	-6.24E-02	-8.31E-02
GarageCars*BldgType Duplex	1	-0.080839	0.041590	-1.94	-2.12E-02	-5.72E-04	-3.78E-02	1.34E-02	-3.21E-02
GarageCars*BldgType Twnhs	1	0.029139	0.066006	0.44	8.59E-02	1.77E-01	1.31E-01	2.60E-01	1.60E-01

## Forward Selection Multiple Linear Regression

### The GLMSELECT Procedure

<b>Data Set</b>	WORK.TRAIN_6
<b>Dependent Variable</b>	SalePrice_I
<b>Selection Method</b>	Forward
<b>Select Criterion</b>	Significance Level
<b>Stop Criterion</b>	Significance Level
<b>Choose Criterion</b>	Cross Validation
<b>Entry Significance Level (SLE)</b>	0.5
<b>Cross Validation Method</b>	Split
<b>Cross Validation Fold</b>	5
<b>Effect Hierarchy Enforced</b>	Single

<b>Number of Observations Read</b>	1460
<b>Number of Observations Used</b>	1452

Class Level Information		
Class	Levels	Values
LotConfig	5	Corner CulDSac FR2 FR3 Inside
BldgType	5	1Fam 2fmCon Duplex Twnhs TwnhsE
HouseStyle	8	1.5Fin 1.5Unf 1Story 2.5Fin 2.5Unf 2Story SFoyer SLvl

Dimensions	
<b>Number of Effects</b>	79
<b>Number of Parameters</b>	268

## Forward Selection Multiple Linear Regression

## The GLMSELECT Procedure

Forward Selection Summary								
Step	Effect Entered	Number Effects In	NumberParms In	Model R-Square	PRESS	CV PRESS	F Value	Pr > F
0	Intercept	1	1	0.0000	231.7413	231.7520	0.00	1.0000
1	GrLlvArea_I	2	2	0.5338	108.2539	108.0105	1660.27	<.0001
2	YearBuilt	3	3	0.7152	66.2858	66.1688	923.15	<.0001
3	OverallCond	4	4	0.7585	56.2813	56.1909	259.37	<.0001
4	TotalBsmtSF	5	5	0.7987	48.1391	47.7174	288.66	<.0001
5	GarageCars	6	6	0.8193	43.2619	42.7619	165.58	<.0001
6	Fireplaces	7	7	0.8293	40.9988	40.5333	84.23	<.0001
7	GrLlvArea*TotalBsmtS	8	8	0.8374	42.5758	41.2275	72.05	<.0001
8	GrLlvArea*GarageCars	9	9	0.8446	39.6681	38.8164	66.68	<.0001
9	BldgType	10	13	0.8515	38.4791	37.8080	16.77	<.0001
10	OverallCon*YearBuilt	11	14	0.8564	37.4904	36.6067	49.39	<.0001
11	GarageCars*BldgType	12	18	0.8598	36.5759	35.7486	8.50	<.0001
12	LotArea	13	19	0.8622	36.0785	35.0199	24.96	<.0001
13	LotArea*TotalBsmtSF	14	20	0.8677	34.6398	34.3765	59.67	<.0001
14	LotArea*BldgType	15	24	0.8705	35.3676	36.1535	7.64	<.0001
15	YearBuilt*GarageCars	16	25	0.8723	34.1876	35.3079	20.81	<.0001
16	GrLlvArea_I*BldgType	17	29	0.8744	33.7030	34.6511	5.88	0.0001
17	GrLlvArea*Fireplaces	18	30	0.8753	33.6894	34.6048	10.06	0.0015
18	YearBuilt*Fireplaces	19	31	0.8762	33.6243	34.5685	10.71	0.0011
19	LotArea*OverallCond	20	32	0.8770	32.6085	32.9927	8.95	0.0028
20	MasVnrArea	21	33	0.8777	32.4870	32.9503	7.82	0.0052
21	YearBuilt*MasVnrArea	22	34	0.8798	31.9990	32.3638	25.60	<.0001
22	LotArea*MasVnrArea	23	35	0.8804	31.8657	33.0916	7.09	0.0078
23	TotalBsmtSF*BldgType	24	39	0.8814	31.6064	32.7742	2.94	0.0196
24	HouseStyle	25	46	0.8826	31.8251	33.2271	2.11	0.0401
25	LotArea*HouseStyle	26	53	0.8840	30.8112	32.2177	2.39	0.0196
26	YearBuilt*TotalBsmtS	27	54	0.8846	30.8704	32.1722	6.48	0.0110
27	GrLlvArea*HouseStyle	28	61	0.8863	30.4652*	32.0568	3.11	0.0029
28	TotalBsmt*Fireplaces	29	62	0.8868	31.5656	32.6654	4.98	0.0258
29	MasVnrAre*TotalBsmtS	30	63	0.8873	31.3598	31.8327	7.20	0.0074
30	MasVnrAre*HouseStyle	31	67	0.8881	31.5196	31.8601	2.39	0.0490
31	GrLlvArea*OverallCon	32	68	0.8884	31.6856	31.8048	3.78	0.0522
32	GrLlvArea*MasVnrArea	33	69	0.8888	31.1865	31.3497*	4.29	0.0384

## Forward Selection Multiple Linear Regression

### The GLMSELECT Procedure

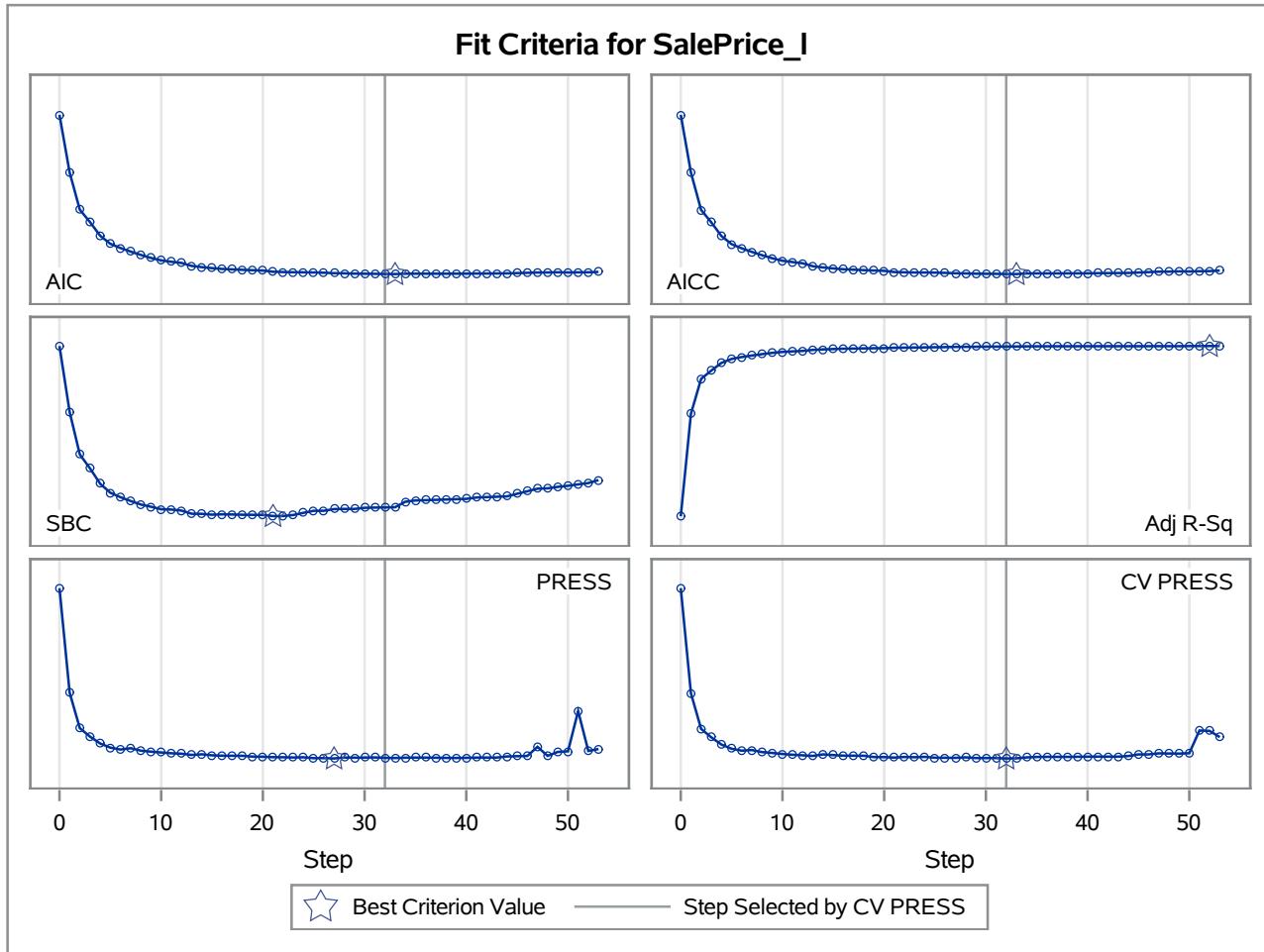
Forward Selection Summary								
Step	Effect Entered	Number Effects In	NumberParms In	Model R-Square	PRESS	CV PRESS	F Value	Pr > F
33	LotArea*GarageCars	34	70	0.8891	31.0085	31.5073	3.80	0.0515
34	BldgType*HouseStyle	35	86	0.8909	31.3369	32.5489	1.45	0.1113
35	YearBuilt*BldgType	36	90	0.8915	31.5106	33.1156	1.86	0.1154
36	OverallCo*Fireplaces	37	91	0.8917	31.4647	33.2317	2.54	0.1114
37	MasVnrAre*GarageCars	38	92	0.8919	31.3073	33.2140	1.86	0.1734
38	OverallCo*GarageCars	39	93	0.8920	31.1270	33.2054	1.58	0.2095
39	OverallCo*MasVnrArea	40	94	0.8921	31.0231	33.3356	1.81	0.1785
40	MasVnrAre*Fireplaces	41	95	0.8922	31.2158	33.4658	1.60	0.2059
41	MasVnrArea*BldgType	42	99	0.8927	31.4797	33.5336	1.44	0.2169
42	OverallCo*TotalBsmtS	43	100	0.8928	31.4860	33.4913	0.93	0.3362
43	GrLlvArea_*YearBuilt	44	101	0.8929	31.5128	33.4999	0.91	0.3412
44	GrLlvArea_!*LotArea	45	102	0.8929	32.8378	34.2170	0.81	0.3686
45	GarageCar*HouseStyle	46	109	0.8935	33.1634	36.1221	1.05	0.3918
46	YearBuilt*HouseStyle	47	116	0.8941	33.3917	36.1097	1.14	0.3376
47	Fireplace*HouseStyle	48	123	0.8948	44.2001	37.3464	1.14	0.3345
48	Fireplace*GarageCars	49	124	0.8948	33.5067	37.1796	0.78	0.3784
49	LotConfig	50	128	0.8951	38.2022	37.0632	1.02	0.3955
50	MasVnrArea*LotConfig	51	132	0.8960	38.8883	37.4974	2.64	0.0327
51	YearBuilt*LotConfig	52	136	0.8964	86.4338	64.2280	1.24	0.2907
52	OverallCon*LotConfig	53	140	0.8969	39.3445	63.7704	1.64	0.1608
53	LotConfig*BldgType	54	148	0.8975	41.6184	56.4341	0.99	0.4382
* Optimal Value of Criterion								

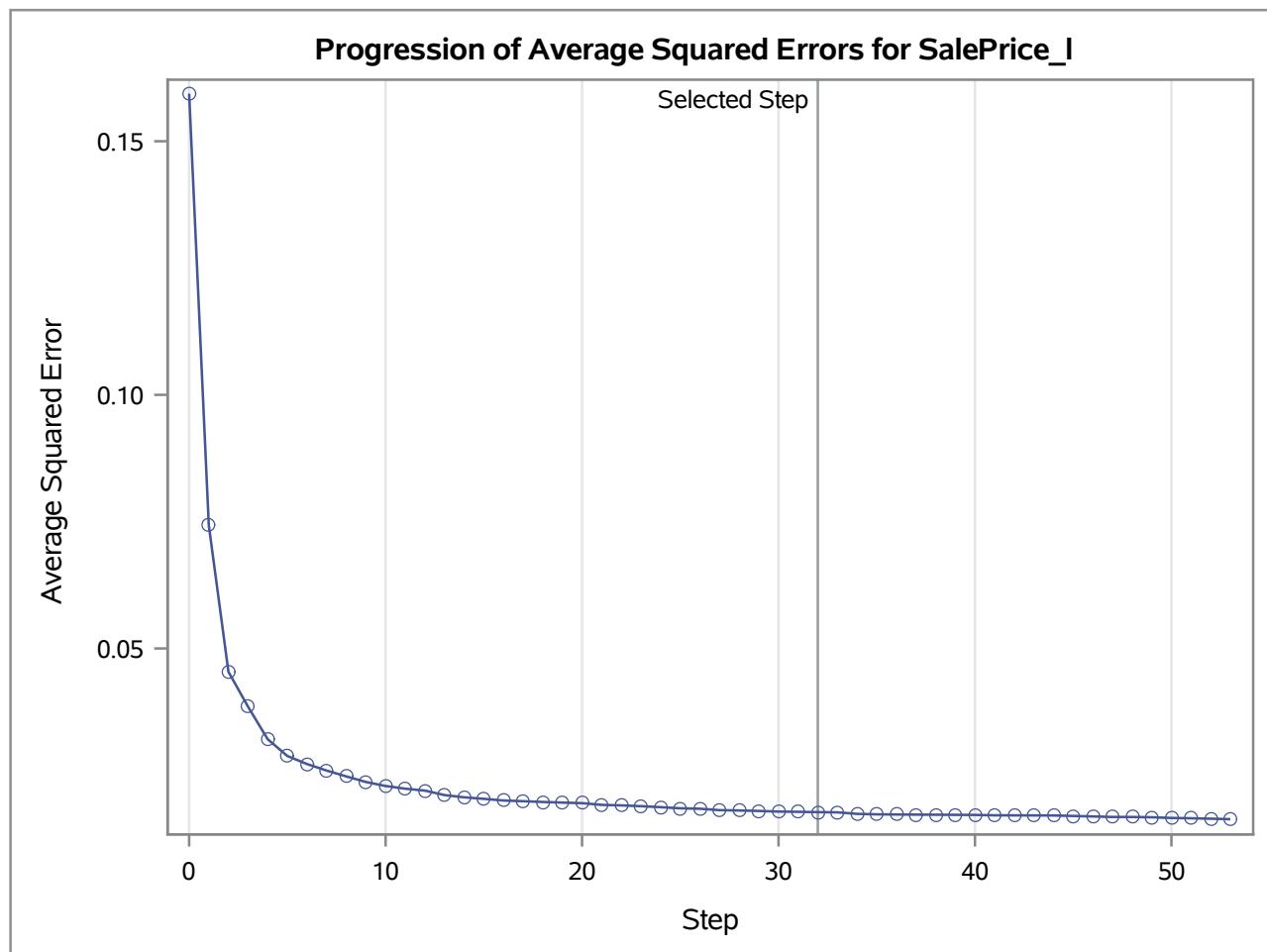
Selection stopped as the candidate for entry has SLE > 0.5.

Stop Details				
Candidate For	Effect	Candidate Significance	Compare Significance	
Entry	GarageCars*LotConfig	0.5247	> 0.5000	(SLE)

## Forward Selection Multiple Linear Regression

## The GLMSELECT Procedure



**Forward Selection Multiple Linear Regression****The GLMSELECT Procedure**

## Forward Selection Multiple Linear Regression

### The GLMSELECT Procedure Selected Model

**The selected model, based on Cross Validation, is the model at Step 32.**

<b>Effects:</b>	Intercept GrLlvArea_I LotArea OverallCond GrLlvArea*OverallCon LotArea*OverallCond YearBuilt OverallCon*YearBuilt MasVnrArea GrLlvArea*MasVnrArea LotArea*MasVnrArea YearBuilt*MasVnrArea TotalBsmtSF GrLlvArea*TotalBsmtS LotArea*TotalBsmtSF YearBuilt*TotalBsmtS MasVnrAre*TotalBsmtS Fireplaces GrLlvArea*Fireplaces YearBuilt*Fireplaces TotalBsmt*Fireplaces BldgType GrLlvArea_*BldgType LotArea*BldgType TotalBsmtSF*BldgType HouseStyle GrLlvArea*HouseStyle LotArea*HouseStyle MasVnrAre*HouseStyle GarageCars GrLlvArea*GarageCars YearBuilt*GarageCars GarageCars*BldgType
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Analysis of Variance				
Source	DF	Sum of Squares	Mean Square	F Value
<b>Model</b>	68	205.67805	3.02468	162.49
<b>Error</b>	1383	25.74416	0.01861	
<b>Corrected Total</b>	1451	231.42221		

<b>Root MSE</b>	0.13644
<b>Dependent Mean</b>	12.02239
<b>R-Square</b>	0.8888
<b>Adj R-Sq</b>	0.8833
<b>AIC</b>	-4263.17484
<b>AICC</b>	-4255.97716
<b>PRESS</b>	31.18646
<b>SBC</b>	-5352.80673
<b>CV PRESS</b>	31.34966

Cross Validation Details			
<b>Index</b>	Observations		<b>CV PRESS</b>
	<b>Fitted</b>	<b>Left Out</b>	
1	1161	291	6.4411
2	1161	291	6.0336
3	1162	290	6.6836
4	1162	290	5.8301
5	1162	290	6.3612
Total			31.3497

## Forward Selection Multiple Linear Regression

### The GLMSELECT Procedure Selected Model

<b>Parameter Estimates</b>									
<b>Parameter</b>	<b>DF</b>	<b>Estimate</b>	<b>Standard Error</b>	<b>t Value</b>	<b>Cross Validation Estimates</b>				
					<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Intercept</b>	1	-3.963794	2.060281	-1.92	2.82E-01	-1.26E+01	-2.33E+01	-1.01E+01	-8.82E+00
<b>GrLlvArea_I</b>	1	0.373223	0.126757	2.94	-1.82E+00	-3.93E-01	1.52E+00	-6.34E-01	-6.98E-01
<b>LotArea</b>	1	0.000033415	0.000009627	3.47	8.74E-05	6.29E-05	1.06E-04	9.15E-05	4.93E-05
<b>OverallCond</b>	1	1.639692	0.272263	6.02	1.96E+00	1.49E+00	1.61E+00	1.75E+00	1.63E+00
<b>GrLlvArea*OverallCon</b>	1	-0.021903	0.010294	-2.13	-4.27E-02	-3.78E-02	-4.13E-02	-2.71E-02	-4.10E-02
<b>LotArea*OverallCond</b>	1	0.000000827	0.000000765	1.08	9.48E-07	1.83E-06	1.91E-07	-7.53E-07	8.59E-07
<b>YearBuilt</b>	1	0.006201	0.000949	6.54	3.72E-03	1.02E-02	1.58E-02	9.25E-03	9.37E-03
<b>OverallCon*YearBuilt</b>	1	-0.000727	0.000131	-5.54	-8.27E-04	-6.01E-04	-6.54E-04	-7.62E-04	-6.57E-04
<b>MasVnrArea</b>	1	-0.017436	0.002867	-6.08	-1.39E-02	-1.20E-02	-1.13E-02	-1.35E-02	-1.31E-02
<b>GrLlvArea*MasVnrArea</b>	1	0.000279	0.000135	2.07	-6.45E-05	2.50E-05	6.32E-05	-1.83E-04	9.53E-05
<b>LotArea*MasVnrArea</b>	1	5.707036E-10	2.5327371E-9	0.23	-2.61E-09	-5.22E-09	2.46E-09	-3.41E-09	-5.68E-09
<b>YearBuilt*MasVnrArea</b>	1	0.000007980	0.000001438	5.55	7.30E-06	6.04E-06	5.66E-06	7.70E-06	6.39E-06
<b>TotalBsmtSF</b>	1	-0.002395	0.000987	-2.43	-9.38E-04	-2.43E-03	-3.62E-03	-2.74E-03	-2.04E-03
<b>GrLlvArea*TotalBsmtS</b>	1	-0.000107	0.000037851	-2.82	-9.26E-05	-1.22E-04	5.73E-05	-2.36E-06	-9.18E-05
<b>LotArea*TotalBsmtSF</b>	1	-6.938669E-9	9.392766E-10	-7.39	-3.45E-09	-4.23E-09	-6.92E-09	-6.49E-09	-4.74E-09
<b>YearBuilt*TotalBsmtS</b>	1	0.000001801	0.000000519	3.47	1.02E-06	1.96E-06	1.84E-06	1.64E-06	1.72E-06
<b>MasVnrAre*TotalBsmtS</b>	1	-0.000000313	8.3656532E-8	-3.75	-2.43E-07	-2.36E-07	-1.40E-07	-3.55E-07	-2.85E-07
<b>Fireplaces</b>	1	2.361244	0.537520	4.39	2.68E+00	1.91E+00	1.69E+00	2.90E+00	2.05E+00
<b>GrLlvArea*Fireplaces</b>	1	0.031398	0.024033	1.31	1.43E-02	2.72E-02	8.62E-02	3.77E-02	4.64E-02
<b>YearBuilt*Fireplaces</b>	1	-0.001327	0.000261	-5.09	-1.50E-03	-1.14E-03	-1.19E-03	-1.67E-03	-1.28E-03
<b>TotalBsmt*Fireplaces</b>	1	0.000065312	0.000019433	3.36	8.24E-05	4.41E-05	-4.38E-05	5.38E-05	4.33E-05
<b>BldgType 1Fam</b>	1	-0.700475	0.495642	-1.41	4.01E+00	6.82E+00	3.99E+00	4.50E+00	4.01E+00
<b>BldgType 2fmCon</b>	1	-0.342244	0.782099	-0.44	8.07E+00	1.49E+01	6.45E+00	2.04E+01	1.29E+01
<b>BldgType Duplex</b>	1	0.914102	0.711772	1.28	1.08E+01	1.02E+01	4.84E+00	2.37E+00	8.66E+00
<b>BldgType Twnhs</b>	1	-0.472378	1.064502	-0.44	9.58E+00	1.42E+01	4.74E+00	8.16E+00	6.42E+00
<b>GrLlvArea_I*BldgType 1Fam</b>	1	0.123911	0.074519	1.66	3.67E-01	3.51E-01	3.14E-01	3.10E-01	5.55E-01
<b>GrLlvArea_I*BldgType 2fmCon</b>	1	0.057697	0.112334	0.51	4.87E-01	4.76E-01	2.87E-01	2.92E-01	6.62E-01
<b>GrLlvArea_I*BldgType Duplex</b>	1	-0.085182	0.103806	-0.82	5.43E-03	-5.04E-02	-1.67E-01	-1.15E-01	1.16E-01
<b>GrLlvArea_I*BldgType Twnhs</b>	1	0.080573	0.160165	0.50	3.33E-01	6.52E-01	1.02E+00	5.01E-01	8.80E-01
<b>LotArea*BldgType 1Fam</b>	1	-0.000017011	0.000006729	-2.53	-1.42E-05	-1.22E-05	-1.58E-05	-1.84E-05	-4.71E-06
<b>LotArea*BldgType 2fmCon</b>	1	-0.000015912	0.000006952	-2.29	-1.58E-05	-1.17E-05	-1.49E-05	-1.96E-05	-8.90E-06
<b>LotArea*BldgType Duplex</b>	1	-0.000024013	0.000009500	-2.53	-2.15E-05	-1.18E-05	-1.62E-05	-1.78E-05	-2.29E-05
<b>LotArea*BldgType Twnhs</b>	1	0.000142	0.000056677	2.51	6.80E-06	5.40E-05	-1.82E-05	-1.11E-05	1.05E-04

## Forward Selection Multiple Linear Regression

### The GLMSELECT Procedure Selected Model

<b>Parameter Estimates</b>									
<b>Parameter</b>	<b>DF</b>	<b>Estimate</b>	<b>Standard Error</b>	<b>t Value</b>	<b>Cross Validation Estimates</b>				
					<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
TotalBsmtSF*BldgType 1Fam	1	-0.000116	0.000058276	-2.00	-2.46E-04	-3.41E-04	-2.52E-04	-2.61E-04	-4.63E-04
TotalBsmtSF*BldgType 2fmCon	1	0.000049016	0.000113	0.43	-1.36E-04	-2.78E-04	-3.67E-04	-4.47E-05	-2.67E-04
TotalBsmtSF*BldgType Duplex	1	-0.000136	0.000069001	-1.97	-2.08E-04	-3.42E-04	-2.62E-04	-2.70E-04	-4.31E-04
TotalBsmtSF*BldgType Twnhs	1	-0.000675	0.000224	-3.02	-7.13E-04	-1.09E-03	-1.57E-03	-1.11E-03	-1.53E-03
HouseStyle 1.5Fin	1	-1.930158	0.653181	-2.96	5.98E-01	7.25E+00	6.40E+00	4.78E+00	5.53E+00
HouseStyle 1.5Unf	1	-0.401442	2.301456	-0.17	7.69E+00	1.40E+01	1.45E+01	9.45E+00	1.12E+01
HouseStyle 1Story	1	-0.680280	0.572211	-1.19	-8.30E-02	4.64E+00	5.01E+00	5.29E+00	3.99E+00
HouseStyle 2.5Fin	1	-2.384245	4.474996	-0.53	7.63E+00	1.05E+02	1.00E+02	1.37E+01	8.01E+01
HouseStyle 2.5Unf	1	-0.781661	1.710825	-0.46	-2.61E+01	-1.66E+01	4.07E+01	-2.34E+01	-9.13E+00
HouseStyle 2Story	1	-1.804850	0.597646	-3.02	1.70E+00	4.24E+00	4.40E+00	5.02E+00	3.81E+00
HouseStyle SFoyer	1	0.194096	1.175752	0.17	2.74E-01	2.36E+00	7.06E+00	1.03E+01	3.32E+00
GrLlvArea*HouseStyle 1.5Fin	1	0.273806	0.092300	2.97	1.75E-01	1.09E-01	1.98E-01	1.31E-01	1.93E-01
GrLlvArea*HouseStyle 1.5Unf	1	0.033621	0.337956	0.10	7.10E-01	7.64E-01	2.73E-01	7.90E-01	8.06E-01
GrLlvArea*HouseStyle 1Story	1	0.092943	0.082136	1.13	-7.76E-03	-9.78E-03	-2.90E-02	-3.80E-02	9.78E-02
GrLlvArea*HouseStyle 2.5Fin	1	0.297640	0.595001	0.50	-9.90E-01	-3.68E+00	-4.11E+00	-4.13E-01	-3.04E+00
GrLlvArea*HouseStyle 2.5Unf	1	0.059358	0.246207	0.24	7.11E-01	2.19E+00	-7.73E-01	6.40E-01	4.42E-01
GrLlvArea*HouseStyle 2Story	1	0.259233	0.084712	3.06	1.38E-01	1.65E-01	1.89E-01	1.72E-01	2.99E-01
GrLlvArea*HouseStyle SFoyer	1	-0.024647	0.179524	-0.14	-2.91E-01	1.01E-01	1.19E-02	-2.64E-01	-9.70E-02
LotArea*HouseStyle 1.5Fin	1	-0.000011808	0.000005709	-2.07	-9.59E-08	-1.54E-05	-1.67E-05	-1.39E-05	-1.64E-05
LotArea*HouseStyle 1.5Unf	1	0.000020022	0.000021590	0.93	2.85E-05	8.82E-06	7.85E-06	8.05E-06	1.00E-05
LotArea*HouseStyle 1Story	1	-0.000004797	0.000005549	-0.86	3.88E-06	-1.01E-05	-1.52E-05	-1.17E-05	-1.31E-05
LotArea*HouseStyle 2.5Fin	1	0.000007783	0.000021671	0.36	5.34E-05	-8.39E-05	-5.59E-05	2.13E-05	-5.49E-05
LotArea*HouseStyle 2.5Unf	1	0.000041921	0.000025759	1.63	7.55E-05	1.82E-05	8.10E-06	7.25E-05	1.03E-04
LotArea*HouseStyle 2Story	1	-0.000009701	0.000005610	-1.73	2.69E-06	-1.50E-05	-1.54E-05	-1.42E-05	-1.79E-05
LotArea*HouseStyle SFoyer	1	-0.000008077	0.000012352	-0.65	-6.81E-06	-4.30E-05	-3.34E-05	-3.01E-05	-2.32E-05
MasVnrAre*HouseStyle 1.5Fin	1	0.000173	0.000171	1.01	2.76E-04	2.82E-04	2.06E-04	3.06E-04	1.92E-04
MasVnrAre*HouseStyle 1.5Unf	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MasVnrAre*HouseStyle 1Story	1	0.000077016	0.000112	0.69	8.86E-05	1.17E-04	5.28E-05	2.15E-04	8.43E-05
MasVnrAre*HouseStyle 2.5Fin	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MasVnrAre*HouseStyle 2.5Unf	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MasVnrAre*HouseStyle 2Story	1	-0.000159	0.000123	-1.29	-6.77E-05	-5.16E-05	-6.81E-05	-6.98E-05	-1.42E-04
MasVnrAre*HouseStyle SFoyer	1	0.000170	0.000294	0.58	7.44E-05	2.37E-04	-1.84E-07	2.72E-04	-4.67E-05
GarageCars	1	-1.440810	0.417899	-3.45	-9.33E-01	-6.54E-01	-1.25E+00	-1.33E+00	-1.63E+00

## Forward Selection Multiple Linear Regression

### The GLMSELECT Procedure Selected Model

Parameter	DF	Estimate	Standard Error	t Value	Parameter Estimates					Cross Validation Estimates				
					1	2	3	4	5	1	2	3	4	5
GrLlvArea*GarageCars	1	0.019673	0.018538	1.06	1.26E-02	-3.69E-02	-5.00E-02	-2.30E-02	-2.08E-02					
YearBuilt*GarageCars	1	0.000697	0.000207	3.37	4.07E-04	4.23E-04	7.49E-04	7.01E-04	8.43E-04					
GarageCars*BldgType 1Fam	1	0.003297	0.037279	0.09	-5.59E-03	5.38E-02	4.48E-03	4.83E-02	2.80E-02					
GarageCars*BldgType 2fmCon	1	-0.063600	0.048908	-1.30	-1.35E-01	-8.52E-02	-1.22E-01	-1.34E-01	-1.00E-01					
GarageCars*BldgType Duplex	1	-0.063731	0.041609	-1.53	-2.58E-02	-5.86E-03	-3.50E-02	-6.77E-03	-3.05E-02					
GarageCars*BldgType Twnhs	1	0.026883	0.065708	0.41	8.08E-02	1.47E-01	9.70E-02	2.36E-01	1.28E-01					

## Backward Selection Multiple Linear Regression

### The GLMSELECT Procedure

<b>Data Set</b>	WORK.TRAIN_6
<b>Dependent Variable</b>	SalePrice_I
<b>Selection Method</b>	Backward
<b>Select Criterion</b>	Significance Level
<b>Stop Criterion</b>	Significance Level
<b>Choose Criterion</b>	Cross Validation
<b>Stay Significance Level (SLS)</b>	0.1
<b>Cross Validation Method</b>	Split
<b>Cross Validation Fold</b>	5
<b>Effect Hierarchy Enforced</b>	Single

<b>Number of Observations Read</b>	1460
<b>Number of Observations Used</b>	1452

Class Level Information		
Class	Levels	Values
LotConfig	5	Corner CulDSac FR2 FR3 Inside
BldgType	5	1Fam 2fmCon Duplex Twnhs TwnhsE
HouseStyle	8	1.5Fin 1.5Unf 1Story 2.5Fin 2.5Unf 2Story SFoyer SLvl

Dimensions	
<b>Number of Effects</b>	79
<b>Number of Parameters</b>	268

## Backward Selection Multiple Linear Regression

### The GLMSELECT Procedure

Backward Selection Summary								
Step	Effect Removed	Number Effects In	NumberParms In	Model R-Square	PRESS	CV PRESS	F Value	Pr > F
0		79	221	0.9011	41.2719	57.3730		
1	<b>GrLlvArea_*YearBuilt</b>	78	220	0.9011	41.0872	57.4077	0.00	0.9857
2	<b>GrLlvArea_!*FullBath</b>	77	219	0.9011	40.9051	57.2367	0.00	0.9865
3	<b>LotArea*LotConfig</b>	76	216	0.9011	39.6817	68.4142	0.05	0.9833
4	<b>OverallCond*BldgType</b>	75	212	0.9010	39.1678	67.5088	0.12	0.9738
5	<b>FullBath*Fireplaces</b>	74	211	0.9010	39.0155	67.4571	0.00	0.9585
6	<b>TotalBsmtS*LotConfig</b>	73	208	0.9010	38.3485	65.9014	0.11	0.9563
7	<b>LotConfig*HouseStyle</b>	72	195	0.9004	37.2566	65.4030	0.60	0.8575
8	<b>GrLlvArea_*LotConfig</b>	71	192	0.9003	37.0472	62.2164	0.13	0.9406
9	<b>TotalBsmt*HouseStyle</b>	70	186	0.9001	35.3000	73.8645	0.46	0.8401
10	<b>TotalBsmt*GarageCars</b>	69	185	0.9001	35.0548	75.0939	0.11	0.7379
11	<b>FullBath*LotConfig</b>	68	182	0.9000	34.8561	70.4012	0.45	0.7203
12	<b>OverallCo*TotalBsmtS</b>	67	181	0.9000	34.7787	67.8926	0.19	0.6640
13	<b>MasVnrArea*FullBath</b>	66	180	0.9000	34.6832	69.0602	0.20	0.6542
14	<b>GrLlvArea*MasVnrArea</b>	65	179	0.9000	34.4953	69.6850	0.13	0.7189
15	<b>Fireplaces*BldgType</b>	64	175	0.8998	34.2765	68.1428	0.64	0.6334
16	<b>GrLlvArea*TotalBsmtS</b>	63	174	0.8998	34.0434	68.0903	0.19	0.6627
17	<b>LotConfig*BldgType</b>	62	166	0.8993	33.6236	68.6438	0.73	0.6626
18	<b>OverallCo*HouseStyle</b>	61	160	0.8989	33.5457	72.9292	0.86	0.5275
19	<b>LotArea*YearBuilt</b>	60	159	0.8988	33.0189	71.3666	0.58	0.4478
20	<b>FullBath*GarageCars</b>	59	158	0.8988	32.9694	70.6185	0.59	0.4409
21	<b>LotArea*Fireplaces</b>	58	157	0.8987	32.7290	70.1491	0.72	0.3959
22	<b>GarageCars*LotConfig</b>	57	154	0.8985	32.7757	70.1188	0.97	0.4055
23	<b>Fireplaces*LotConfig</b>	56	151	0.8983	32.5110	70.1198	0.79	0.4981
24	<b>Fireplace*HouseStyle</b>	55	144	0.8977	46.1281	61.9136	1.11	0.3541
25	<b>LotArea*BldgType</b>	54	140	0.8974	45.5977	60.6882	1.10	0.3559
26	<b>OverallCond*FullBath</b>	53	139	0.8973	43.4234	61.3787	0.94	0.3317
27	<b>GrLlvArea*GarageCars</b>	52	138	0.8972	42.2625	56.0028	1.00	0.3165
28	<b>GarageCar*HouseStyle</b>	51	131	0.8967	33.9466	53.2150	1.05	0.3943
29	<b>Fireplace*GarageCars</b>	50	130	0.8966	33.7942	53.8933	0.83	0.3630
30	<b>OverallCon*LotConfig</b>	49	126	0.8962	49.6725	54.5313	1.30	0.2688
31	<b>YearBuilt*LotConfig</b>	48	122	0.8959	33.3072	37.8825	0.99	0.4101
32	<b>LotArea*OverallCond</b>	47	121	0.8958	33.2764	37.5622	0.73	0.3937

\* Optimal Value of Criterion

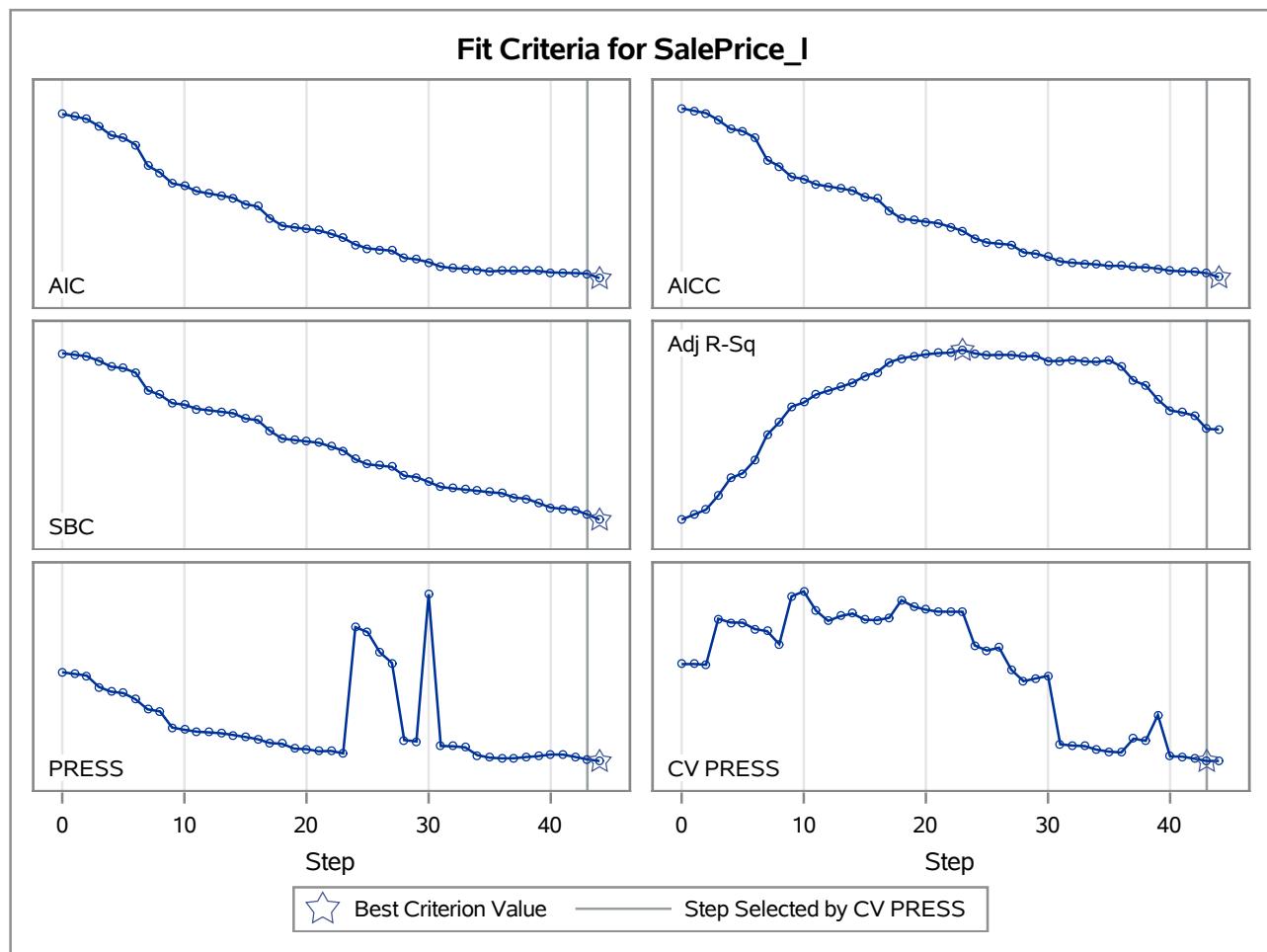
## Backward Selection Multiple Linear Regression

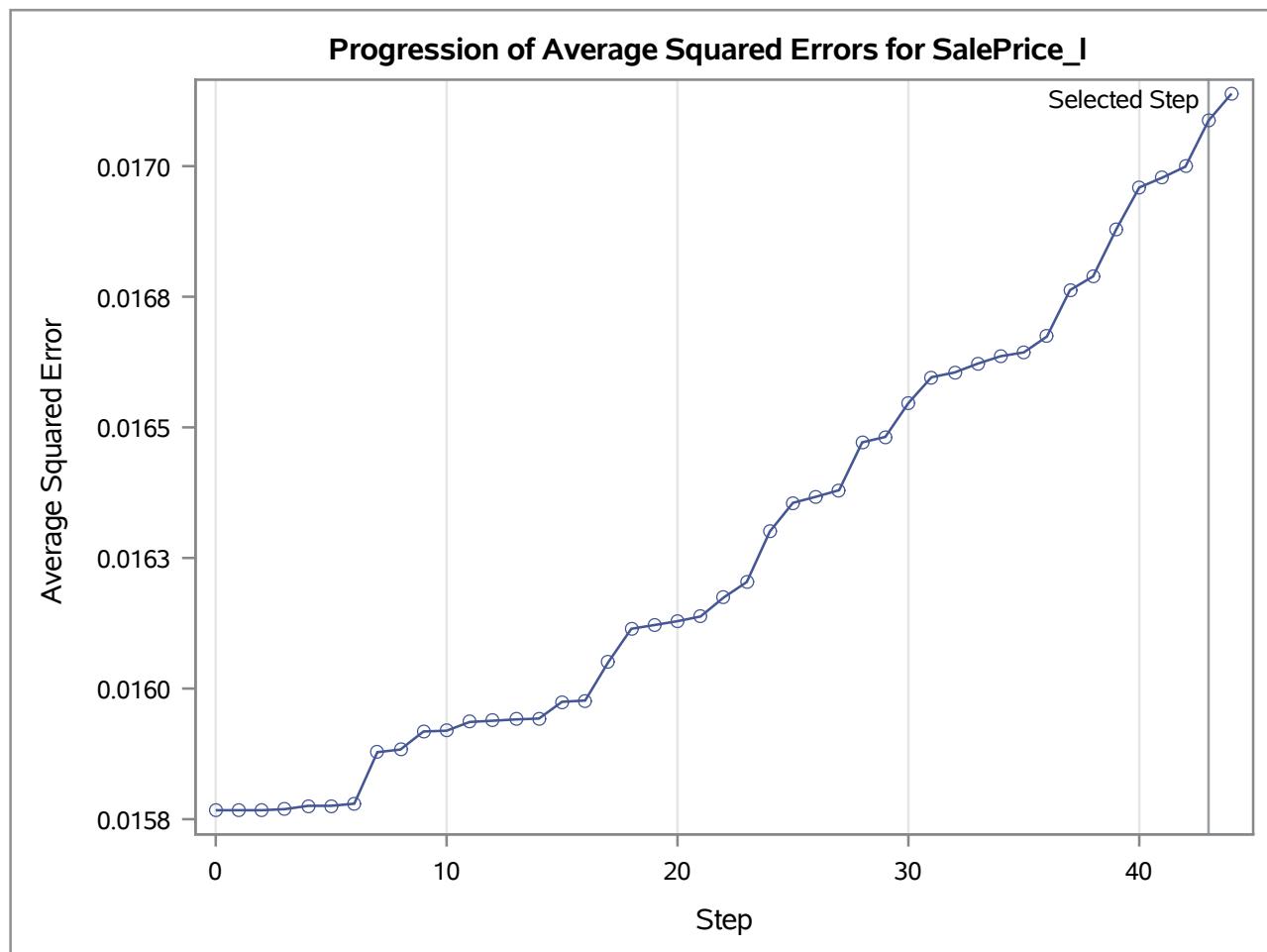
### The GLMSELECT Procedure

Backward Selection Summary									
Step	Effect Removed	Number Effects In	NumberParms In	Model R-Square	PRESS	CV PRESS	F Value	Pr > F	
33	GrLlvArea*Fireplaces	46	120	0.8957	33.1586	37.4320	1.35	0.2449	
34	GrLlvArea_I*LotArea	45	119	0.8956	32.3119	36.5395	1.14	0.2850	
35	LotArea*FullBath	44	118	0.8956	32.0480	36.0833	0.58	0.4452	
36	OverallCo*MasVnrArea	43	117	0.8954	31.9735	35.8819	2.43	0.1190	
37	MasVnrArea*BldgType	42	113	0.8948	31.9853	39.2341	1.78	0.1309	
38	OverallCo*GarageCars	41	112	0.8947	32.1152	38.7287	2.10	0.1474	
39	FullBath*BldgType	40	108	0.8941	32.2151	44.9981	1.79	0.1281	
40	YearBuilt*BldgType	39	104	0.8936	32.3852	34.9297	1.60	0.1718	
41	LotArea*MasVnrArea	38	103	0.8935	32.3756	34.8695	1.50	0.2205	
42	LotArea*GarageCars	37	102	0.8933	32.1240	34.3657	1.67	0.1965	
43	MasVnrArea*LotConfig	36	98	0.8928	31.8633	33.7996*	1.75	0.1365	
44	LotConfig	35	94	0.8925	31.6838*	33.8271	1.02	0.3950	
* Optimal Value of Criterion									

Selection stopped because the next candidate for removal has SLS < 0.1.

Stop Details					
Candidate For	Effect	Candidate Significance		Compare Significance	
Removal	MasVnrAre*Fireplaces	0.0998	<	0.1000	(SLS)

**Backward Selection Multiple Linear Regression****The GLMSELECT Procedure**

**Backward Selection Multiple Linear Regression****The GLMSELECT Procedure**

## Backward Selection Multiple Linear Regression

### The GLMSELECT Procedure Selected Model

**The selected model, based on Cross Validation, is the model at Step 43.**

<b>Effects:</b>	Intercept GrLlvArea_I LotArea OverallCond GrLlvArea*OverallCon YearBuilt OverallCon*YearBuilt MasVnrArea YearBuilt*MasVnrArea TotalBsmtSF LotArea*TotalBsmtSF YearBuilt*TotalBsmtS MasVnrAre*TotalBsmtS FullBath YearBuilt*FullBath TotalBsmtSF*FullBath Fireplaces OverallCo*Fireplaces YearBuilt*Fireplaces MasVnrAre*Fireplaces TotalBsmt*Fireplaces LotConfig BldgType GrLlvArea_I*BldgType TotalBsmtSF*BldgType HouseStyle GrLlvArea*HouseStyle LotArea*HouseStyle YearBuilt*HouseStyle MasVnrAre*HouseStyle FullBath*HouseStyle BldgType*HouseStyle GarageCars YearBuilt*GarageCars MasVnrAre*GarageCars GarageCars*BldgType
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Analysis of Variance				
Source	DF	Sum of Squares	Mean Square	F Value
Model	97	206.61164	2.13002	116.24
Error	1354	24.81057	0.01832	
Corrected Total	1451	231.42221		

Root MSE	0.13537
Dependent Mean	12.02239
R-Square	0.8928
Adj R-Sq	0.8851
AIC	-4258.80878
AICC	-4244.16381
PRESS	31.86333
SBC	-5195.30046
CV PRESS	33.79961

Cross Validation Details			
Index	Observations		CV PRESS
	Fitted	Left Out	
1	1161	291	8.1053
2	1161	291	6.5819
3	1162	290	6.2140
4	1162	290	5.9008
5	1162	290	6.9976
Total			33.7996

## Backward Selection Multiple Linear Regression

### The GLMSELECT Procedure Selected Model

Parameter Estimates									
Parameter	DF	Estimate	Standard Error	t Value	Cross Validation Estimates				
					1	2	3	4	5
Intercept	1	-2.984879	4.285222	-0.70	-2.83E+00	-1.58E+00	-2.88E+00	-3.44E+00	-1.94E+00
GrLlvArea_I	1	0.260225	0.193213	1.35	3.92E-01	2.20E-01	2.64E-01	2.08E-01	-2.60E-02
LotArea	1	0.000022503	0.000006246	3.60	1.01E-05	2.30E-05	2.80E-05	2.73E-05	2.23E-05
OverallCond	1	1.657791	0.297744	5.57	1.83E+00	1.58E+00	1.45E+00	1.67E+00	1.73E+00
GrLlvArea*OverallCon	1	-0.034408	0.011766	-2.92	-4.09E-02	-3.51E-02	-2.84E-02	-3.02E-02	-3.58E-02
YearBuilt	1	0.006106	0.001950	3.13	5.59E-03	5.52E-03	6.04E-03	6.50E-03	6.54E-03
OverallCon*YearBuilt	1	-0.000688	0.000143	-4.81	-7.57E-04	-6.45E-04	-6.02E-04	-7.06E-04	-7.23E-04
MasVnrArea	1	-0.013385	0.003067	-4.36	-1.45E-02	-1.40E-02	-1.14E-02	-1.42E-02	-1.29E-02
YearBuilt*MasVnrArea	1	0.000006774	0.000001577	4.30	7.34E-06	7.04E-06	5.73E-06	7.31E-06	6.50E-06
TotalBsmtSF	1	-0.002186	0.001213	-1.80	-2.32E-03	-1.76E-03	-1.38E-03	-3.47E-03	-2.31E-03
LotArea*TotalBsmtSF	1	-7.944363E-9	8.870314E-10	-8.96	-6.65E-09	-7.64E-09	-8.88E-09	-8.74E-09	-7.14E-09
YearBuilt*TotalBsmtS	1	0.000001455	0.000000613	2.37	1.52E-06	1.29E-06	9.94E-07	2.10E-06	1.65E-06
MasVnrAre*TotalBsmtS	1	-0.000000285	6.0450845E-8	-4.72	-2.05E-07	-2.93E-07	-1.23E-07	-3.90E-07	-3.15E-07
FullBath	1	-1.771438	0.764655	-2.32	-1.81E+00	-2.29E+00	-2.00E+00	-2.18E+00	-9.24E-01
YearBuilt*FullBath	1	0.000924	0.000391	2.37	9.58E-04	1.20E-03	1.02E-03	1.13E-03	4.93E-04
TotalBsmtSF*FullBath	1	-0.000047523	0.000022595	-2.10	-1.10E-04	-7.11E-05	7.48E-06	-4.48E-05	-5.31E-05
Fireplaces	1	2.103083	0.566151	3.71	2.21E+00	1.85E+00	1.92E+00	2.66E+00	1.75E+00
OverallCo*Fireplaces	1	0.012358	0.006455	1.91	1.78E-02	1.58E-02	7.60E-03	4.59E-03	1.73E-02
YearBuilt*Fireplaces	1	-0.001113	0.000284	-3.92	-1.20E-03	-9.92E-04	-9.89E-04	-1.38E-03	-9.46E-04
MasVnrAre*Fireplaces	1	0.000071770	0.000043676	1.64	8.24E-05	5.24E-05	4.72E-05	8.72E-05	8.33E-05
TotalBsmt*Fireplaces	1	0.000055355	0.000016919	3.27	8.95E-05	5.89E-05	2.36E-05	7.93E-05	5.14E-05
LotConfig	Corner	1	0.009003	0.009818	0.92	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LotConfig	CulDSac	1	0.021005	0.015791	1.33	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LotConfig	FR2	1	-0.023822	0.020814	-1.14	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LotConfig	FR3	1	0.012537	0.068784	0.18	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BldgType	1Fam	1	-2.130838	1.040649	-2.05	-1.86E+00	-2.20E+00	-2.05E+00	-2.25E+00
BldgType	2fmCon	1	-3.098019	1.401079	-2.21	-3.56E+00	-3.86E+00	-1.88E+00	-3.43E+00
BldgType	Duplex	1	0.186624	1.348024	0.14	9.90E-01	3.14E-01	1.22E+00	-4.69E-01
BldgType	Twnhs	1	-1.700194	2.253695	-0.75	4.28E-01	-1.83E+00	-4.47E+00	-1.50E+00
GrLlvArea_I*BldgType 1Fam		1	0.313048	0.160866	1.95	2.84E-01	3.18E-01	2.97E-01	3.26E-01
GrLlvArea_I*BldgType 2fmCon		1	0.494130	0.212487	2.33	4.97E-01	6.02E-01	3.25E-01	5.38E-01
GrLlvArea_I*BldgType Duplex		1	-0.005693	0.202941	-0.03	-8.70E-02	-2.83E-02	-1.49E-01	8.50E-02
GrLlvArea_I*BldgType Twnhs		1	0.273887	0.350222	0.78	-4.77E-02	2.91E-01	7.16E-01	2.38E-01

## Backward Selection Multiple Linear Regression

### The GLMSELECT Procedure Selected Model

<b>Parameter Estimates</b>									
<b>Parameter</b>	<b>DF</b>	<b>Estimate</b>	<b>Standard Error</b>	<b>t Value</b>	<b>Cross Validation Estimates</b>				
					<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
TotalBsmtSF*BldgType 1Fam	1	-0.000340	0.000143	-2.37	-2.81E-04	-3.86E-04	-3.21E-04	-3.40E-04	-6.11E-04
TotalBsmtSF*BldgType 2fmCon	1	-0.000263	0.000186	-1.41	-1.65E-04	-3.36E-04	-3.60E-04	-2.61E-04	-3.90E-04
TotalBsmtSF*BldgType Duplex	1	-0.000346	0.000148	-2.34	-2.19E-04	-3.84E-04	-3.50E-04	-3.49E-04	-5.98E-04
TotalBsmtSF*BldgType Twnhs	1	-0.000953	0.000381	-2.50	-4.57E-04	-9.84E-04	-1.42E-03	-9.79E-04	-1.36E-03
HouseStyle 1.5Fin	1	1.861824	3.650504	0.51	-1.08E+00	2.20E+00	2.16E+00	2.41E+00	2.67E+00
HouseStyle 1.5Unf	1	5.782962	7.938453	0.73	3.63E+00	5.94E+00	9.90E+00	5.34E+00	6.16E+00
HouseStyle 1Story	1	-0.218664	3.612767	-0.06	-2.24E+00	-1.77E+00	-1.38E-01	2.34E+00	3.40E-01
HouseStyle 2.5Fin	1	7.000127	24.150334	0.29	2.30E+00	-9.54E-01	9.34E+00	6.09E+00	3.25E+00
HouseStyle 2.5Unf	1	-7.651068	10.026715	-0.76	-9.20E+00	9.46E+00	-4.62E+00	-5.51E+00	-3.11E+01
HouseStyle 2Story	1	1.464063	3.551814	0.41	-3.44E-01	-2.71E-01	2.26E+00	3.35E+00	2.02E+00
HouseStyle S Foyer	1	-1.022831	6.069505	-0.17	-3.91E+00	-3.92E+00	3.27E-01	8.42E-02	6.89E-01
GrLlvArea*HouseStyle 1.5Fin	1	0.268046	0.113478	2.36	2.25E-01	2.40E-01	3.69E-01	2.72E-01	2.34E-01
GrLlvArea*HouseStyle 1.5Unf	1	0.096478	0.378304	0.26	6.40E-02	-1.26E-01	-7.95E-02	4.80E-01	5.69E-02
GrLlvArea*HouseStyle 1Story	1	0.054159	0.098857	0.55	-2.23E-02	8.66E-02	8.62E-02	5.18E-02	9.92E-02
GrLlvArea*HouseStyle 2.5Fin	1	-0.524007	1.778963	-0.29	-2.33E-01	8.54E-02	-6.93E-01	-6.82E-01	-2.28E-01
GrLlvArea*HouseStyle 2.5Unf	1	-0.314131	0.344259	-0.91	-3.65E-01	-1.92E+00	-2.63E-01	-2.07E-01	6.08E-02
GrLlvArea*HouseStyle 2Story	1	0.219238	0.103976	2.11	1.70E-01	2.16E-01	2.28E-01	2.69E-01	2.43E-01
GrLlvArea*HouseStyle S Foyer	1	-0.058463	0.198296	-0.29	-3.36E-01	1.40E-01	1.12E-01	-7.46E-02	-1.43E-01
LotArea*HouseStyle 1.5Fin	1	-0.000010346	0.000006239	-1.66	-2.84E-07	-1.14E-05	-1.39E-05	-1.38E-05	-1.13E-05
LotArea*HouseStyle 1.5Unf	1	0.000019287	0.000021830	0.88	3.41E-05	1.97E-05	3.42E-06	2.05E-05	1.49E-05
LotArea*HouseStyle 1Story	1	-0.000004568	0.000006257	-0.73	5.61E-06	-5.61E-06	-1.01E-05	-7.24E-06	-6.03E-06
LotArea*HouseStyle 2.5Fin	1	0.000040206	0.000048967	0.82	2.92E-05	2.22E-05	4.37E-05	4.68E-05	3.53E-05
LotArea*HouseStyle 2.5Unf	1	0.000068668	0.000028902	2.38	7.92E-05	1.63E-04	5.62E-05	4.88E-05	4.10E-05
LotArea*HouseStyle 2Story	1	-0.000009933	0.000006327	-1.57	2.79E-06	-1.20E-05	-1.29E-05	-1.37E-05	-1.16E-05
LotArea*HouseStyle S Foyer	1	-0.000021062	0.000015417	-1.37	2.91E-06	-3.78E-05	-2.60E-05	-2.60E-05	-1.47E-05
YearBuilt*HouseStyle 1.5Fin	1	-0.001893	0.001727	-1.10	-4.02E-04	-1.93E-03	-2.38E-03	-2.25E-03	-2.17E-03
YearBuilt*HouseStyle 1.5Unf	1	-0.003600	0.003578	-1.01	-2.20E-03	-2.88E-03	-4.98E-03	-4.74E-03	-3.42E-03
YearBuilt*HouseStyle 1Story	1	-0.000169	0.001674	-0.10	1.09E-03	4.69E-04	-2.68E-04	-1.42E-03	-6.91E-04
YearBuilt*HouseStyle 2.5Fin	1	-0.001915	0.006256	-0.31	-5.86E-04	-2.68E-04	-2.29E-03	-4.66E-04	-1.24E-03
YearBuilt*HouseStyle 2.5Unf	1	0.004563	0.004733	0.96	5.71E-03	1.19E-03	2.95E-03	3.16E-03	1.53E-02
YearBuilt*HouseStyle 2Story	1	-0.001592	0.001634	-0.97	-5.16E-04	-6.95E-04	-2.01E-03	-2.70E-03	-1.98E-03
YearBuilt*HouseStyle S Foyer	1	0.000629	0.003014	0.21	2.96E-03	1.37E-03	-5.41E-04	1.36E-04	-7.40E-05
MasVnrAre*HouseStyle 1.5Fin	1	0.000298	0.000155	1.93	2.58E-04	4.20E-04	2.40E-04	2.29E-04	3.21E-04

## Backward Selection Multiple Linear Regression

### The GLMSELECT Procedure Selected Model

Parameter Estimates									
Parameter	DF	Estimate	Standard Error	t Value	Cross Validation Estimates				
					1	2	3	4	5
MasVnrAre*HouseStyle 1.5Unf	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MasVnrAre*HouseStyle 1Story	1	0.000118	0.000112	1.05	-2.45E-05	1.10E-04	6.37E-05	2.00E-04	1.07E-04
MasVnrAre*HouseStyle 2.5Fin	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MasVnrAre*HouseStyle 2.5Unf	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MasVnrAre*HouseStyle 2Story	1	-0.000041799	0.000109	-0.38	-1.43E-04	-9.15E-06	-6.99E-06	-9.79E-05	-2.11E-05
MasVnrAre*HouseStyle SFoyer	1	0.000122	0.000311	0.39	9.45E-05	2.83E-04	2.60E-05	1.30E-04	2.82E-04
FullBath*HouseStyle 1.5Fin	1	-0.011203	0.052087	-0.22	7.97E-03	-2.36E-04	-3.03E-02	7.95E-03	-1.47E-03
FullBath*HouseStyle 1.5Unf	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FullBath*HouseStyle 1Story	1	-0.026978	0.045926	-0.59	2.22E-02	-2.35E-02	-6.32E-02	-4.40E-02	-1.12E-02
FullBath*HouseStyle 2.5Fin	1	0.036743	0.134027	0.27	1.83E-01	2.98E-02	1.89E-02	-1.28E-01	2.37E-02
FullBath*HouseStyle 2.5Unf	1	0.265618	0.101000	2.63	3.05E-01	7.37E-01	2.24E-01	2.85E-01	3.37E-01
FullBath*HouseStyle 2Story	1	0.043424	0.047320	0.92	3.93E-02	2.75E-02	4.31E-02	4.02E-02	7.77E-02
FullBath*HouseStyle SFoyer	1	-0.011798	0.068823	-0.17	3.25E-02	2.43E-02	-2.90E-02	-1.55E-02	-3.18E-02
BldgType*HouseStyle 1Fam 1.5Fin	1	-0.054274	0.178965	-0.30	1.52E-01	-9.94E-02	-7.92E-02	1.02E-01	-6.91E-02
BldgType*HouseStyle 1Fam 1.5Unf	1	0.417710	0.220012	1.90	-8.24E-02	3.52E-01	3.47E-01	4.61E-01	0.00E+00
BldgType*HouseStyle 1Fam 1Story	1	0.195763	0.145945	1.34	1.25E-01	2.72E-01	2.05E-01	1.64E-01	3.42E-01
BldgType*HouseStyle 1Fam 2.5Fin	1	0.371113	0.562915	0.66	0.00E+00	6.10E-01	9.65E-02	0.00E+00	6.18E-01
BldgType*HouseStyle 1Fam 2.5Unf	1	0.329042	0.202543	1.62	-1.72E-01	0.00E+00	2.23E-01	2.73E-01	6.52E-01
BldgType*HouseStyle 1Fam 2Story	1	0.082777	0.125404	0.66	2.45E-02	1.48E-01	7.42E-02	5.62E-02	5.80E-02
BldgType*HouseStyle 1Fam SFoyer	1	0.378674	0.173342	2.18	3.13E-01	5.69E-01	2.61E-01	3.92E-01	5.88E-01
BldgType*HouseStyle 2fmCon 1.5Fin	1	-0.299296	0.230936	-1.30	4.95E-01	-3.90E-01	-2.68E-01	-1.69E-01	-3.47E-01
BldgType*HouseStyle 2fmCon 1.5Unf	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BldgType*HouseStyle 2fmCon 1Story	1	0.017974	0.220712	0.08	4.61E-01	8.94E-02	8.04E-02	-5.29E-02	1.64E-01
BldgType*HouseStyle 2fmCon 2.5Fin	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BldgType*HouseStyle 2fmCon 2.5Unf	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BldgType*HouseStyle 2fmCon 2Story	1	-0.396124	0.204639	-1.94	0.00E+00	-3.13E-01	-2.87E-01	-4.63E-01	-5.00E-01
BldgType*HouseStyle 2fmCon SFoyer	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BldgType*HouseStyle Duplex 1.5Fin	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BldgType*HouseStyle Duplex 1.5Unf	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BldgType*HouseStyle Duplex 1Story	1	0.200528	0.203222	0.99	-1.62E-01	2.87E-01	2.38E-01	1.45E-01	3.40E-01
BldgType*HouseStyle Duplex 2.5Fin	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BldgType*HouseStyle Duplex 2.5Unf	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BldgType*HouseStyle Duplex 2Story	1	0.158780	0.204767	0.78	-1.29E-01	2.29E-01	1.88E-01	7.65E-02	1.55E-01

## Backward Selection Multiple Linear Regression

### The GLMSELECT Procedure Selected Model

Parameter	DF	Estimate	Standard Error	t Value	Parameter Estimates					Cross Validation Estimates				
										1	2	3	4	5
BldgType*HouseStyle Duplex SFoyer	1	0.345292	0.224704	1.54	0.00E+00	4.85E-01	2.05E-01	3.60E-01	5.13E-01					
BldgType*HouseStyle Twnhs 1.5Fin	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00					
BldgType*HouseStyle Twnhs 1.5Unf	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00					
BldgType*HouseStyle Twnhs 1Story	1	0.783897	0.306467	2.56	4.37E-01	7.71E-01	1.11E+00	7.10E-01	1.03E+00					
BldgType*HouseStyle Twnhs 2.5Fin	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00					
BldgType*HouseStyle Twnhs 2.5Unf	0	0	.	.	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00					
BldgType*HouseStyle Twnhs 2Story	1	0.197326	0.185571	1.06	1.13E-01	2.00E-01	1.89E-01	1.43E-01	1.98E-01					
BldgType*HouseStyle Twnhs SFoyer	1	0.313493	0.289548	1.08	0.00E+00	3.93E-01	4.36E-01	4.33E-01	5.89E-01					
GarageCars	1	-1.014943	0.456158	-2.22	-7.27E-01	-4.64E-01	-1.36E+00	-8.54E-01	-1.54E+00					
YearBuilt*GarageCars	1	0.000529	0.000229	2.31	3.96E-04	2.42E-04	7.08E-04	4.40E-04	7.89E-04					
MasVnrAre*GarageCars	1	0.000120	0.000047401	2.53	9.45E-05	1.61E-04	6.12E-05	6.38E-05	1.37E-04					
GarageCars*BldgType 1Fam	1	0.041212	0.038478	1.07	1.13E-02	5.16E-02	4.14E-02	6.55E-02	4.88E-02					
GarageCars*BldgType 2fmCon	1	-0.079679	0.053885	-1.48	-1.41E-01	-6.30E-02	-6.71E-02	-6.90E-02	-5.85E-02					
GarageCars*BldgType Duplex	1	-0.023102	0.042318	-0.55	-2.52E-02	-1.68E-02	-2.67E-02	-1.92E-03	-2.42E-02					
GarageCars*BldgType Twnhs	1	0.098948	0.062370	1.59	3.18E-02	1.10E-01	5.90E-02	1.75E-01	1.04E-01					