

```

GET
  FILE='C:\Users\BuroK\Google Drive\MacEwan\WebSite\Hal\Stat252\assignments\expenditure.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
GET
  FILE='C:\Users\BuroK\Google Drive\MacEwan\WebSite\Hal\Stat252\assignments\midterm.sav'.
DATASET NAME DataSet2 WINDOW=FRONT.
CORRELATIONS
  /VARIABLES=midp attendance
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.

```

Correlations

Notes

Output Created		30-MAR-2020 10:22:20
Comments		
Input	Data	C:\Users\BuroK\Google Drive\MacEwan\WebSite\Hal\Stat252\assignments\midterm.sav
	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	43
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
Syntax		CORRELATIONS /VARIABLES=midp attendance /PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.

Notes

Resources	Processor Time	00:00:00.05
	Elapsed Time	00:00:00.03

[DataSet2] C:\Users\BuroK\Google Drive\MacEwan\WebSite\Hal\Stat252\assignments\midterm.sav

Correlations

		Midterm Result	Attendance Score
Midterm Result	Pearson Correlation	1	.602**
	Sig. (2-tailed)		.000
	N	43	43
Attendance Score	Pearson Correlation	.602**	1
	Sig. (2-tailed)	.000	
	N	43	43

**. Correlation is significant at the 0.01 level (2-tailed).

```
DATASET ACTIVATE DataSet1.
GET
FILE='C:\Users\BuroK\Google Drive\MacEwan\Teaching\Stat252\Data\SPSS_data\albuquerque.sav'.
```

```
>Warning # 5281. Command name: GET FILE
>SPSS Statistics is running in Unicode encoding mode. This file is encoded in
>a locale-specific (code page) encoding. The defined width of any string
>variables are automatically tripled in order to avoid possible data loss. You
>can use ALTER TYPE to set the width of string variables to the width of the
>longest observed value for each string variable.
DATASET NAME DataSet3 WINDOW=FRONT.
```

```
GET
FILE='C:\Users\BuroK\Google Drive\MacEwan\Teaching\Stat252\Data\SPSS_data\house process.sav'.
```

```
>Warning # 5281. Command name: GET FILE
>SPSS Statistics is running in Unicode encoding mode. This file is encoded in
```

n

>a locale-specific (code page) encoding. The defined width of any string
>variables are automatically tripled in order to avoid possible data loss. Y
ou

>can use ALTER TYPE to set the width of string variables to the width of the
>longest observed value for each string variable.

ALTER TYPE ALL(A=AMIN).

Alter Type

Notes

Output Created		01-APR-2020 09:55:06
Comments		
Input	Data	C:\Users\BuroK\Google Drive\MacEwan\Teaching\Stat252\Data\SPSS_data\house proces.sav
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		ALTER TYPE ALL (A=AMIN).
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.22

C:\Users\BuroK\Google Drive\MacEwan\Teaching\Stat252\Data\SPSS_data\house pro
ces.sav

Altered Types

location	A24	AMIN
----------	-----	------

DATASET NAME DataSet4 WINDOW=FRONT.

DATASET ACTIVATE DataSet1.

DATASET CLOSE DataSet4.

DATASET ACTIVATE DataSet3.

GET

FILE='C:\Users\BuroK\Google Drive\MacEwan\Teaching\Stat252\Data\SPSS_data\M
ENTALID.sav'.

DATASET NAME DataSet5 WINDOW=FRONT.

DATASET ACTIVATE DataSet1.

DATASET CLOSE DataSet5.

DATASET ACTIVATE DataSet3.

GET

FILE='C:\Users\BuroK\Google Drive\MacEwan\Teaching\Stat252\Data\SPSS_data\sir.sav'.

>Warning # 5281. Command name: GET FILE

>SPSS Statistics is running in Unicode encoding mode. This file is encoded in

>a locale-specific (code page) encoding. The defined width of any string

>variables are automatically tripled in order to avoid possible data loss. You

>can use ALTER TYPE to set the width of string variables to the width of the

>longest observed value for each string variable.

DATASET NAME DataSet6 WINDOW=FRONT.

DATASET ACTIVATE DataSet1.

DATASET CLOSE DataSet6.

GET

FILE='C:\Users\BuroK\Google Drive\MacEwan\Teaching\Stat252\Data\SPSS_data\clock.sav'.

>Warning # 5281. Command name: GET FILE

>SPSS Statistics is running in Unicode encoding mode. This file is encoded in

>a locale-specific (code page) encoding. The defined width of any string

>variables are automatically tripled in order to avoid possible data loss. You

>can use ALTER TYPE to set the width of string variables to the width of the

>longest observed value for each string variable.

DATASET NAME DataSet7 WINDOW=FRONT.

DATASET ACTIVATE DataSet1.

DATASET CLOSE DataSet7.

GET

FILE='C:\Users\BuroK\Google Drive\MacEwan\Teaching\Stat252\Data\SPSS_data\dominance.sav'.

>Warning # 5281. Command name: GET FILE

>SPSS Statistics is running in Unicode encoding mode. This file is encoded in

>a locale-specific (code page) encoding. The defined width of any string

>variables are automatically tripled in order to avoid possible data loss. You

>can use ALTER TYPE to set the width of string variables to the width of the
 >longest observed value for each string variable.
 ALTER TYPE ALL(A=AMIN).

Alter Type

Notes

Output Created		01-APR-2020 09:56:36
Comments		
Input	Data	C:\Users\BuroK\Google Drive\MacEwan\Teaching\Stat252\Data\SPSS_data\dominance.sav
	Filter	<none>
	Weight	<none>
	Split File	<none>
Syntax		ALTER TYPE ALL (A=AMIN).
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.02

C:\Users\BuroK\Google Drive\MacEwan\Teaching\Stat252\Data\SPSS_data\dominance
 .sav

Altered Types

Attr	A12	AMIN
Dom	A12	AMIN

DATASET NAME DataSet8 WINDOW=FRONT.

DATASET ACTIVATE DataSet1.

DATASET CLOSE DataSet8.

GET

FILE='C:\Users\BuroK\Google Drive\MacEwan\Teaching\Stat252\Data\SPSS_data\PUlse.sav'.

>Warning # 5281. Command name: GET FILE

>SPSS Statistics is running in Unicode encoding mode. This file is encoded in

>a locale-specific (code page) encoding. The defined width of any string

>variables are automatically tripled in order to avoid possible data loss. Y

ou

>can use ALTER TYPE to set the width of string variables to the width of the
>longest observed value for each string variable.

```
DATASET NAME DataSet9 WINDOW=FRONT.
```

```
DATASET ACTIVATE DataSet1.
```

```
GET
```

```
FILE='C:\Users\BuroK\Google Drive\MacEwan\Teaching\Stat252\Data\SPSS_data\t  
v_educ.sav'.
```

```
>Warning # 5281. Command name: GET FILE
```

```
>SPSS Statistics is running in Unicode encoding mode. This file is encoded i  
n
```

```
>a locale-specific (code page) encoding. The defined width of any string
```

```
>variables are automatically tripled in order to avoid possible data loss. Y  
ou
```

>can use ALTER TYPE to set the width of string variables to the width of the
>longest observed value for each string variable.

```
DATASET NAME DataSet10 WINDOW=FRONT.
```

```
DATASET ACTIVATE DataSet1.
```

```
DATASET CLOSE DataSet10.
```

```
DATASET ACTIVATE DataSet3.
```

```
GET
```

```
FILE='C:\Users\BuroK\Desktop\RealEstate\Windsor\Windsor.sav'.
```

```
DATASET NAME DataSet11 WINDOW=FRONT.
```

```
DATASET CLOSE DataSet9.
```

```
DATASET CLOSE DataSet2.
```

```
DATASET CLOSE DataSet1.
```

```
GRAPH
```

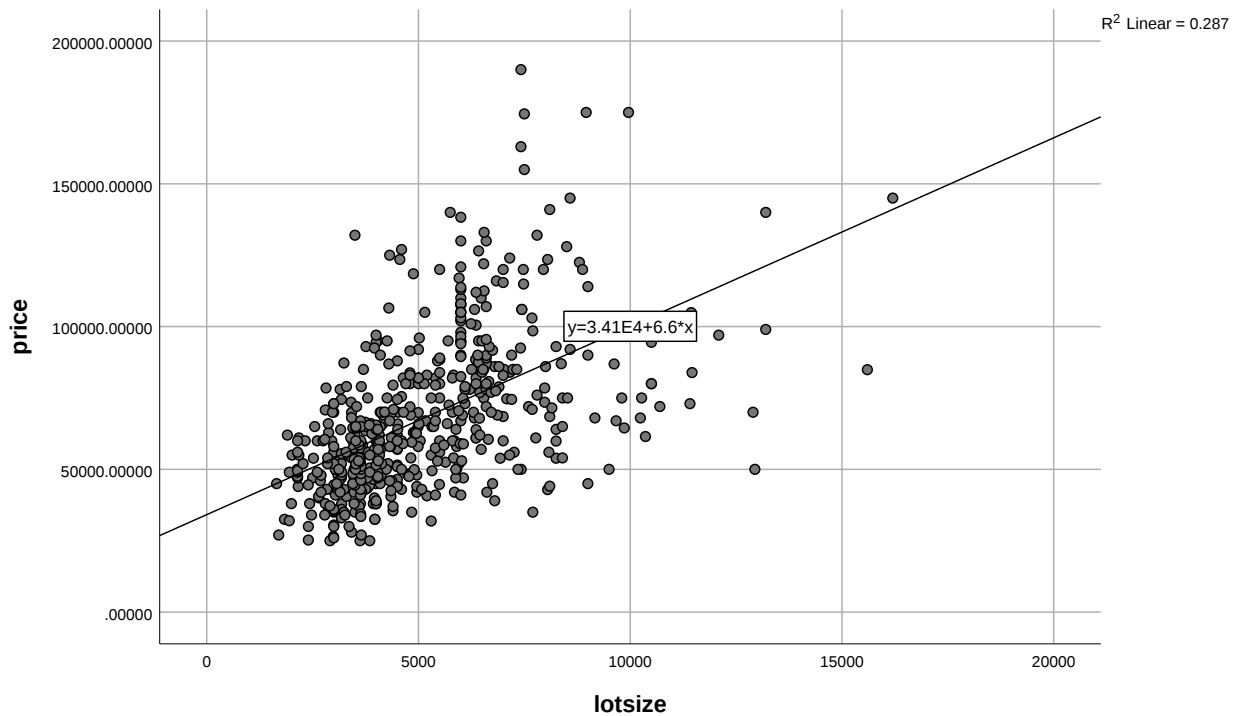
```
/SCATTERPLOT(BIVAR)=lotsize WITH price
```

```
/MISSING=LISTWISE.
```

Graph

Notes

Output Created		06-APR-2020 10:12:12
Comments		
Input	Data	C:\Users\BuroK\Desktop\RealEstate\Windsor\Windsor.sav
	Active Dataset	DataSet11
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	546
Syntax		GRAPH /SCATTERPLOT(BIVAR) =lotsize WITH price /MISSING=LISTWISE.
Resources	Processor Time	00:00:04.55
	Elapsed Time	00:00:19.82



REGRESSION

```

/MISSING LISTWISE
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT price
/METHOD=ENTER lotsize
/RESIDUALS HISTOGRAM(ZRESID) NORMPROB(ZRESID)
/SAVE RESID.

```

Regression

Notes

Output Created		06-APR-2020 10:17:21
Comments		
Input	Data	C:\Users\BuroK\Desktop\RealEstate\Windsor\Windsor.sav
	Active Dataset	DataSet11
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	546
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT price /METHOD=ENTER lotsize /RESIDUALS HISTOGRAM(ZRESID) NORMPROB(ZRESID) /SAVE RESID.

Notes

Resources	Processor Time	00:00:01.28
	Elapsed Time	00:00:00.93
	Memory Required	2848 bytes
	Additional Memory Required for Residual Plots	640 bytes
Variables Created or Modified	RES_1	Unstandardized Residual

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	lotsize ^b	.	Enter

a. Dependent Variable: price

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.536 ^a	.287	.286	22567.05135

a. Predictors: (Constant), lotsize

b. Dependent Variable: price

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.116E+11	1	1.116E+11	219.056	.000 ^b
	Residual	2.770E+11	544	509271806.8		
	Total	3.886E+11	545			

a. Dependent Variable: price

b. Predictors: (Constant), lotsize

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	34136.192	2491.064		13.703	.000
	lotsize	6.599	.446	.536	14.801	.000

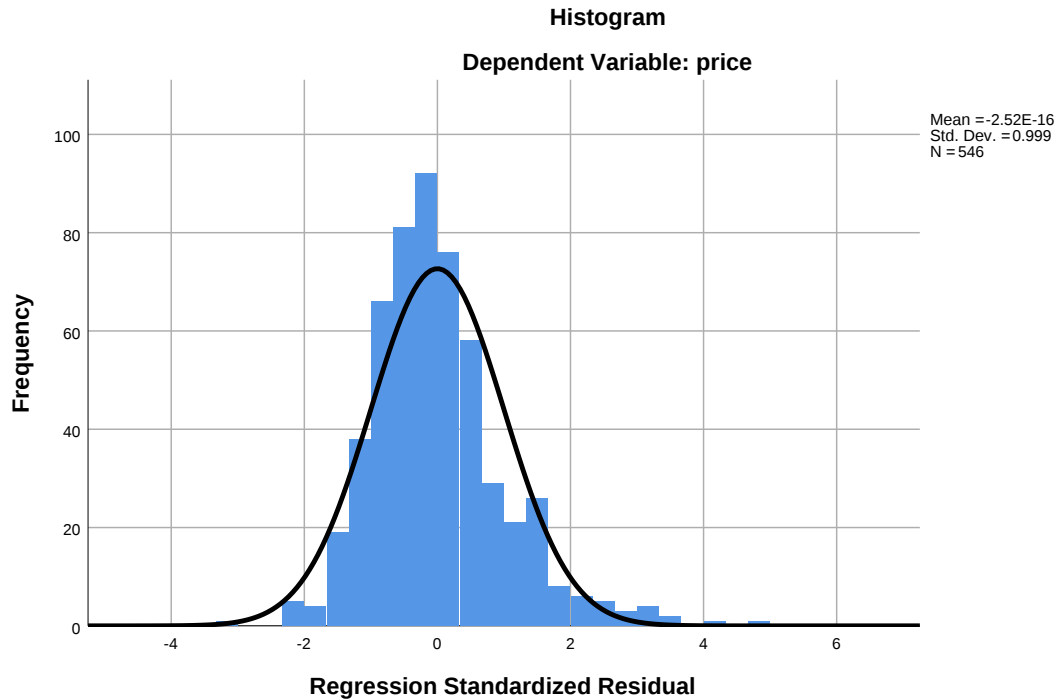
a. Dependent Variable: price

Residuals Statistics^a

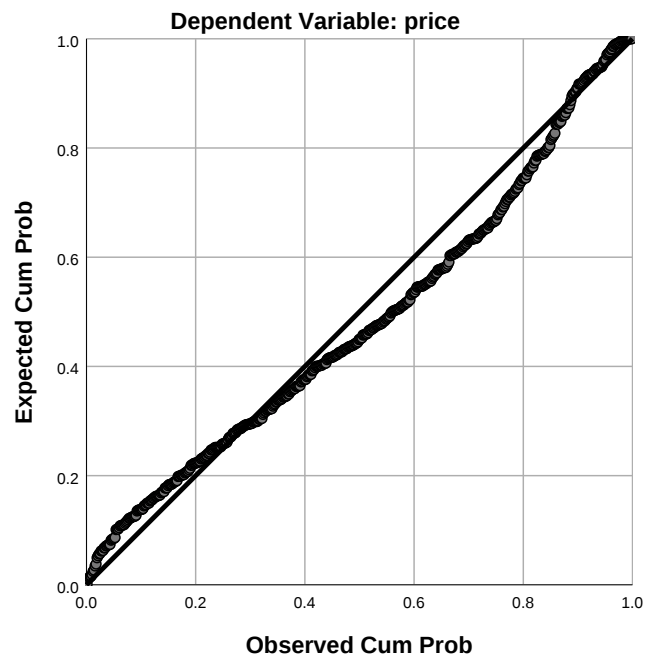
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	45024.15625	141036.2188	68121.59707	14307.17552	546
Residual	-69550.6406	106900.9531	.00000000	22546.33813	546
Std. Predicted Value	-1.614	5.096	.000	1.000	546
Std. Residual	-3.082	4.737	.000	.999	546

a. Dependent Variable: price

Charts



Normal P-P Plot of Regression Standardized Residual

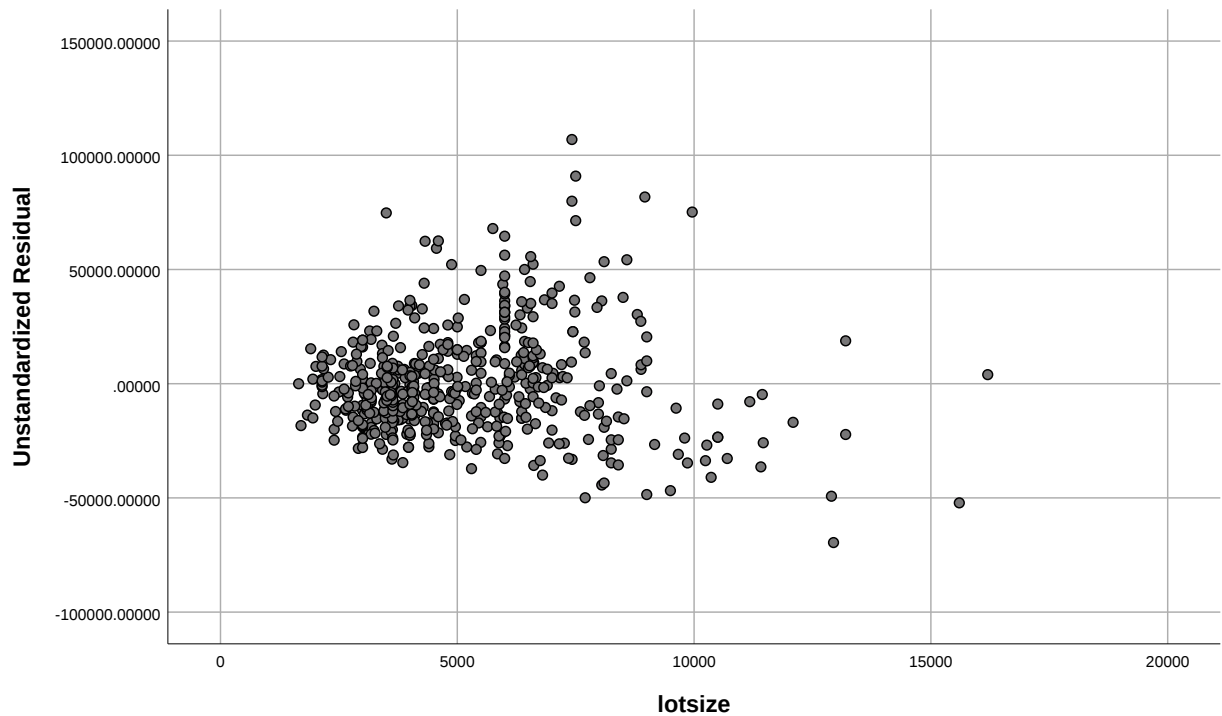


```
GRAPH  
  /SCATTERPLOT(BIVAR)=lotsize WITH RES_1  
  /MISSING=LISTWISE.
```

Graph

Notes

Output Created		06-APR-2020 10:32:18
Comments		
Input	Data	C:\Users\BuroK\Desktop\RealEstate\Windsor\Windsor.sav
	Active Dataset	DataSet11
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	546
Syntax		GRAPH /SCATTERPLOT(BIVAR) =lotsize WITH RES_1 /MISSING=LISTWISE.
Resources	Processor Time	00:00:00.47
	Elapsed Time	00:00:00.27



GRAPH

```

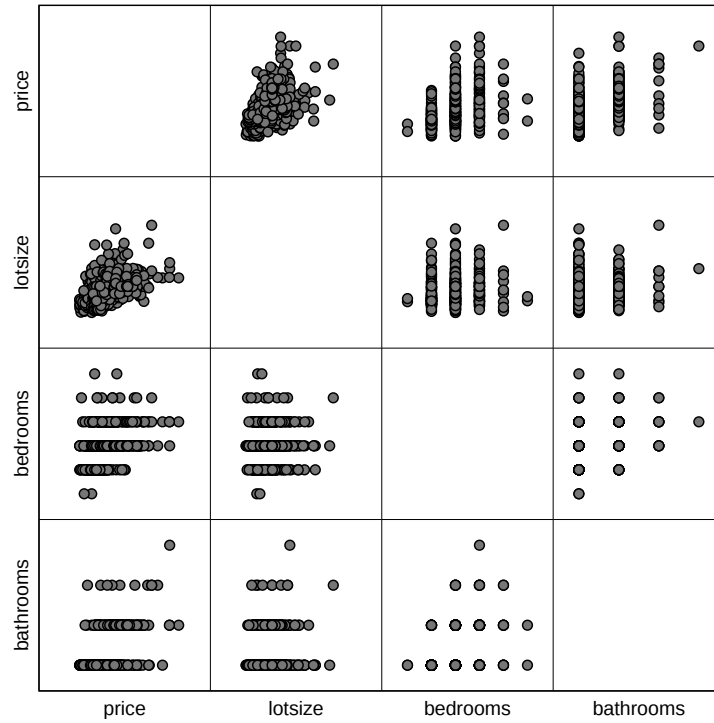
/SCATTERPLOT(MATRIX)=price lotsize bedrooms bathrooms
/MISSING=LISTWISE.

```

Graph

Notes

Output Created		06-APR-2020 10:35:35
Comments		
Input	Data	C:\Users\BuroK\Desktop\RealEstate\Windsor\Windsor.sav
	Active Dataset	DataSet11
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	546
Syntax		GRAPH /SCATTERPLOT (MATRIX)=price lotsize bedrooms bathrooms /MISSING=LISTWISE.
Resources	Processor Time	00:00:00.41
	Elapsed Time	00:00:00.27



```

REGRESSION
/MISSING LISTWISE
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT price
/METHOD=ENTER lotsize bedrooms bathrooms
/RESIDUALS HISTOGRAM(ZRESID) NORMPROB(ZRESID)
/SAVE RESID.

```

Regression

Notes

Output Created		06-APR-2020 10:37:47
Comments		
Input	Data	C:\Users\BuroK\Desktop\RealEstate\Windsor\Windsor.sav
	Active Dataset	DataSet11
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	546
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT price /METHOD=ENTER lotsize bedrooms bathrooms /RESIDUALS HISTOGRAM(ZRESID) NORMPROB(ZRESID) /SAVE RESID.
Resources	Processor Time	00:00:00.58
	Elapsed Time	00:00:00.45
	Memory Required	3872 bytes
	Additional Memory Required for Residual Plots	608 bytes
Variables Created or Modified	RES_2	Unstandardized Residual

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	bathrooms, lotsize, bedrooms ^b	.	Enter

a. Dependent Variable: price

b. All requested variables entered.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.697 ^a	.486	.483	19191.61023

a. Predictors: (Constant), bathrooms, lotsize, bedrooms

b. Dependent Variable: price

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.890E+11	3	6.299E+10	171.025	.000 ^b
	Residual	1.996E+11	542	368317903.1		
	Total	3.886E+11	545			

a. Dependent Variable: price

b. Predictors: (Constant), bathrooms, lotsize, bedrooms

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2418.293	3779.412		-.640	.523
	lotsize	5.411	.388	.439	13.947	.000
	bedrooms	5826.802	1206.571	.161	4.829	.000
	bathrooms	19750.210	1785.083	.371	11.064	.000

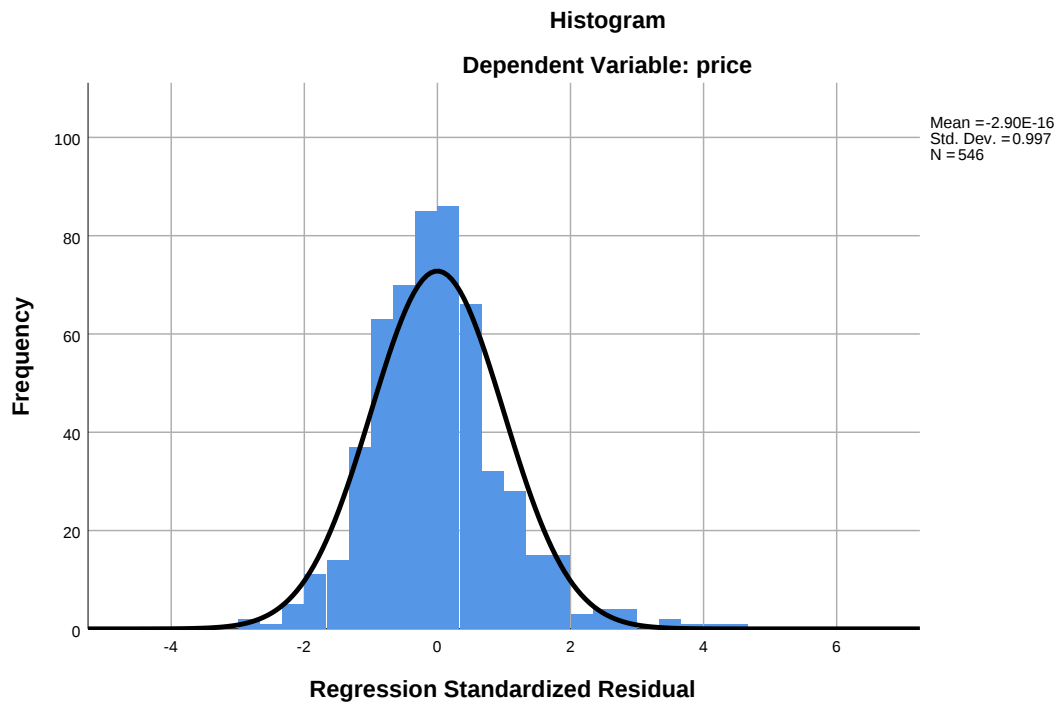
a. Dependent Variable: price

Residuals Statistics^a

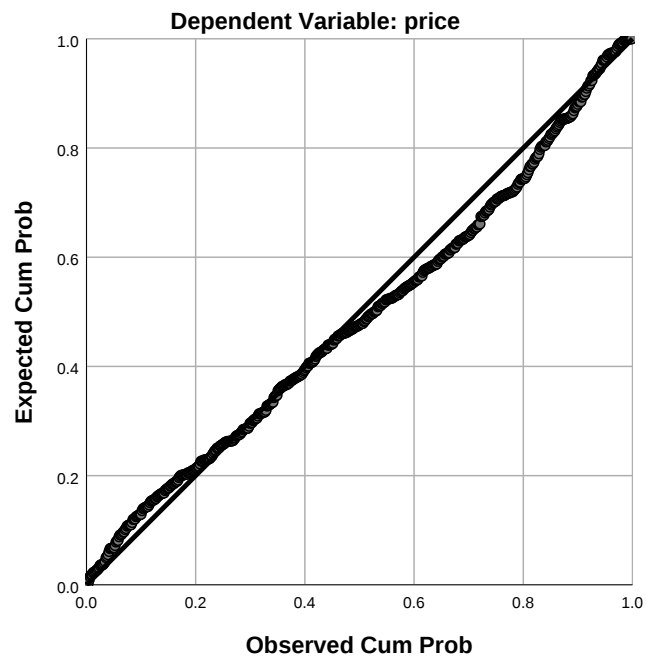
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	38920.48828	173627.7969	68121.59707	18621.01419	546
Residual	-55955.4023	89459.55469	.00000000	19138.71639	546
Std. Predicted Value	-1.568	5.666	.000	1.000	546
Std. Residual	-2.916	4.661	.000	.997	546

a. Dependent Variable: price

Charts



Normal P-P Plot of Regression Standardized Residual



```
UNIANOVA price BY fullbase WITH bedrooms  
  /METHOD=SSTYPE(3)  
  /INTERCEPT=INCLUDE  
  /CRITERIA=ALPHA(0.05)  
  /DESIGN=bedrooms fullbase bedrooms*fullbase.
```

Univariate Analysis of Variance

Notes

Output Created		06-APR-2020 10:53:30
Comments		
Input	Data	C: \Users\BuroK\Desktop\RealEstate\Windsor\Windsor.sav
	Active Dataset	DataSet11
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	546
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA price BY fullbase WITH bedrooms /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /CRITERIA=ALPHA (0.05) /DESIGN=bedrooms fullbase ...
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.13

Between-Subjects Factors

		N
fullbase	no	355
	yes	191

Tests of Between-Subjects Effects

Dependent Variable: price

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6.151E+10 ^a	3	2.050E+10	33.977	.000
Intercept	2.889E+10	1	2.889E+10	47.873	.000
bedrooms	3.767E+10	1	3.767E+10	62.422	.000
fullbase	1766234898	1	1766234898	2.927	.088
fullbase * bedrooms	433936606.4	1	433936606.4	.719	.397
Error	3.271E+11	542	603483896.2		
Total	2.922E+12	546			
Corrected Total	3.886E+11	545			

a. R Squared = .158 (Adjusted R Squared = .154)

```
UNIANOVA price BY prefer WITH lotsize
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/CRITERIA=ALPHA(0.05)
/DESIGN=prefer lotsize lotsize*prefer.
```

Univariate Analysis of Variance

Notes

Output Created		06-APR-2020 10:55:45
Comments		
Input	Data	C: \Users\BuroK\Desktop\RealEstate\Windsor\Windsor.sav
	Active Dataset	DataSet11
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	546
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA price BY prefer WITH lotsize /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /CRITERIA=ALPHA (0.05) /DESIGN=prefer lotsize ...
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02

Between-Subjects Factors

		N
prefer	no	418
	yes	128

Tests of Between-Subjects Effects

Dependent Variable: price

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1.286E+11 ^a	3	4.287E+10	89.364	.000
Intercept	8.687E+10	1	8.687E+10	181.100	.000
prefer	1823505338	1	1823505338	3.801	.052
lotsize	7.369E+10	1	7.369E+10	153.612	.000
prefer * lotsize	50986100.89	1	50986100.89	.106	.745
Error	2.600E+11	542	479701281.6		
Total	2.922E+12	546			
Corrected Total	3.886E+11	545			

a. R Squared = .331 (Adjusted R Squared = .327)

```
UNIANOVA price BY prefer driveway fullbase gasheat aircon garage recreation s
tories WITH lotsize
    bedrooms bathrooms
/METHOD=SSTYPE(3)
/INTERCEPT=INCLUDE
/CRITERIA=ALPHA(0.05)
/DESIGN=prefer lotsize lotsize*prefer driveway fullbase gasheat aircon gara
ge recreation stories
    bedrooms bathrooms.
```

Univariate Analysis of Variance

Notes

Output Created		06-APR-2020 10:57:40
Comments		
Input	Data	C: \Users\BuroK\Desktop\RealEstate\Windsor\Windsor.sav
	Active Dataset	DataSet11
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	546
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the model.
Syntax		UNIANOVA price BY prefer driveway fullbase gasheat aircon garage recreation stories WITH lotsize bedrooms bathrooms /METHOD=SSTYPE(3) /INTERCEPT=INCLUDE /CRITERIA=ALPHA (0.05) /DESIGN=prefer lotsize lotsize*prefer driveway fullbase gasheat aircon ...
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.02

Between-Subjects Factors

		N
prefer	no	418
	yes	128
driveway	no	77
	yes	469
fullbase	no	355
	yes	191
gasheat	no	521
	yes	25
aircon	no	373
	yes	173
garage	0	300
	1	126
	2	108
	3	12
recreation	no	449
	yes	97
stories	1	227
	2	238
	3	40
	4	41

Tests of Between-Subjects Effects

Dependent Variable: price

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2.634E+11 ^a	16	1.646E+10	69.558	.000
Intercept	1.574E+10	1	1.574E+10	66.509	.000
prefer	83571510.47	1	83571510.47	.353	.553
lotsize	2.235E+10	1	2.235E+10	94.444	.000
prefer * lotsize	653183984.8	1	653183984.8	2.760	.097
driveway	2938477207	1	2938477207	12.416	.000
fullbase	2835461194	1	2835461194	11.980	.001
gasheat	3557648842	1	3557648842	15.032	.000
aircon	1.452E+10	1	1.452E+10	61.340	.000
garage	6432221484	3	2144073828	9.059	.000
recreation	1233898896	1	1233898896	5.213	.023
stories	1.242E+10	3	4139289160	17.489	.000
bedrooms	1086890178	1	1086890178	4.592	.033
bathrooms	2.137E+10	1	2.137E+10	90.302	.000
Error	1.252E+11	529	236675176.6		
Total	2.922E+12	546			
Corrected Total	3.886E+11	545			

a. R Squared = .678 (Adjusted R Squared = .668)