

## Regression on Sales Data

Obs	Rep	Software	SalesLastQuarter	SalesThisQuarter
1	1	1	82	90
2	2	1	80	83
3	3	1	78	75
4	4	1	70	62
5	5	1	92	114
6	6	1	80	88
7	7	1	69	66
8	8	1	74	66
9	9	1	84	89
10	10	1	81	90
11	11	1	72	68
12	12	1	81	88
13	13	2	73	70
14	14	2	72	72
15	15	2	74	82
16	16	2	73	75
17	17	2	74	82
18	18	2	89	91
19	19	2	73	90
20	20	2	85	73
21	21	2	78	82
22	22	2	80	77
23	23	2	76	80
24	24	2	74	81
25	25	3	75	83
26	26	3	72	82
27	27	3	66	56
28	28	3	82	87
29	29	3	74	75
30	30	3	76	78
31	31	3	71	59
32	32	3	63	58
33	33	3	73	69
34	34	3	82	86
35	35	3	81	81
36	36	3	77	73

## Regression on Sales Data Check dummy variables

### The FREQ Procedure

Frequency	Table of c1 by Software				
c1	Software(Software Package)				Total
	1	2	3		
0	0	12	12		24
1	12	0	0		12

Total	12	12	12	36
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Frequency	Table of c2 by Software			
c2	Software(Software Package)			
	1	2	3	Total
0	12	0	12	24
1	0	12	0	12
Total	12	12	12	36

## Regression on Sales Data

### Regression with Software package

The REG Procedure

Model: MODEL1

Dependent Variable: SalesThisQuarter sales this quarter with the new software packages

Number of Observations Read	36
Number of Observations Used	36

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	2	379.55556	189.77778	1.47	0.2448
Error	33	4262.75000	129.17424		
Corrected Total	35	4642.30556			

Root MSE	11.36548	R-Square	0.0818
Dependent Mean	78.36111	Adj R-Sq	0.0261
Coeff Var	14.50399		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr >  t
Intercept	Intercept	1	73.91667	3.28093	22.53	<.0001
c1		1	7.66667	4.63994	1.65	0.1080
c2		1	5.66667	4.63994	1.22	0.2306

## Regression on Sales Data

### Regression with Software package

The REG Procedure

Model: MODEL1

Test Soft1vsSoft2 Results for Dependent Variable SalesThisQuarter				
Source	DF	Mean Square	F Value	Pr > F
Numerator	1	24.00000	0.19	0.6692
Denominator	33	129.17424		

## Regression on Sales Data

### Regression with Software package

The REG Procedure

Model: MODEL1

Dependent Variable: SalesThisQuarter sales this quarter with the new software packages

Number of Observations Read	36
Number of Observations Used	36

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	3027.43487	1009.14496	20.00	<.0001
Error	32	1614.87069	50.46471		
Corrected Total	35	4642.30556			

Root MSE	7.10385	R-Square	0.6521
Dependent Mean	78.36111	Adj R-Sq	0.6195
Coeff Var	9.06553		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr >  t
Intercept	Intercept	1	-37.72582	15.54837	-2.43	0.0211
c1		1	1.28352	3.03106	0.42	0.6748
c2		1	2.03703	2.94310	0.69	0.4938
SalesLastQuarter	sales last quarter with the old software	1	1.50192	0.20734	7.24	<.0001

## Regression on Sales Data

### Regression with Software package

The REG Procedure

Model: MODEL1

Test softwareUsefulness Results for Dependent Variable SalesThisQuarter				
Source	DF	Mean Square	F Value	Pr > F
Numerator	2	12.22473	0.24	0.7863
Denominator	32	50.46471		

## Regression on Sales Data

### Regression with Software package

The REG Procedure

Model: MODEL1

Test Soft1vsSoft2 Results for Dependent Variable SalesThisQuarter				
Source	DF	Mean Square	F Value	Pr > F
Numerator	1	3.34916	0.07	0.7984
Denominator	32	50.46471		

## Regression on Sales Data

### Regression with Software package and interaction

The REG Procedure

Model: MODEL1

Dependent Variable: SalesThisQuarter sales this quarter with the new software packages

Number of Observations Read	36
Number of Observations Used	36

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	5	3685.05989	737.01198	23.10	<.0001
Error	30	957.24567	31.90819		
Corrected Total	35	4642.30556			

Root MSE	5.64873	R-Square	0.7938
Dependent Mean	78.36111	Adj R-Sq	0.7594
Coeff Var	7.20859		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr >  t
Intercept	Intercept	1	-44.14966	21.36069	-2.07	0.0475
c1		1	-48.10967	29.68078	-1.62	0.1155
c2		1	96.54191	32.39651	2.98	0.0057
SalesLastQuarter	sales last quarter with the old software	1	1.58834	0.28652	5.54	<.0001
cL1		1	0.62387	0.38786	1.61	0.1182
cL2		1	-1.23405	0.42703	-2.89	0.0071

## Regression on Sales Data

### Regression with Software package and interaction

The REG Procedure

Model: MODEL1

Test Soft1vsSoft2 Results for Dependent Variable SalesThisQuarter				
Source	DF	Mean Square	F Value	Pr > F
Numerator	1	655.89259	20.56	<.0001
Denominator	30	31.90819		

## Regression on Sales Data

### Regression with Software package and interaction

The REG Procedure

Model: MODEL1

Test Interaction Results for Dependent Variable SalesThisQuarter				
Source	DF	Mean Square	F Value	Pr > F
Numerator	1	653.28548	20.47	<.0001
Denominator	30	31.90819		

Denominator	30	31.90819		
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