Bunnies Data

How many rabbits in each drug treatment?

The FREQ Procedure

Frequency Percent Row Pct Col Pct	Table of Time by Drug		
	Drug(Drug (1=HEBP, 0=placebo))		
Time(Time (3,6,9,12 days of healing))	0	1	Total
3	5 12.50 50.00 25.00	5 12.50 50.00 25.00	10 25.00
6	5 12.50 50.00 25.00	5 12.50 50.00 25.00	10 25.00
9	5 12.50 50.00 25.00	5 12.50 50.00 25.00	10 25.00
12	5 12.50 50.00 25.00	5 12.50 50.00 25.00	10 25.00
Total	20 50.00	20 50.00	40 100.00

Bunnies Data

Two way ANOVA

The GLM Procedure

Class Level Information		
Class	Levels	Values
Time	4	3 6 9 12
Drug	2	0 1

Number of Observations Read	40
Number of Observations Used	40

Bunnies Data

Two way ANOVA

The GLM Procedure

Dependent Variable: Force Force in newtons

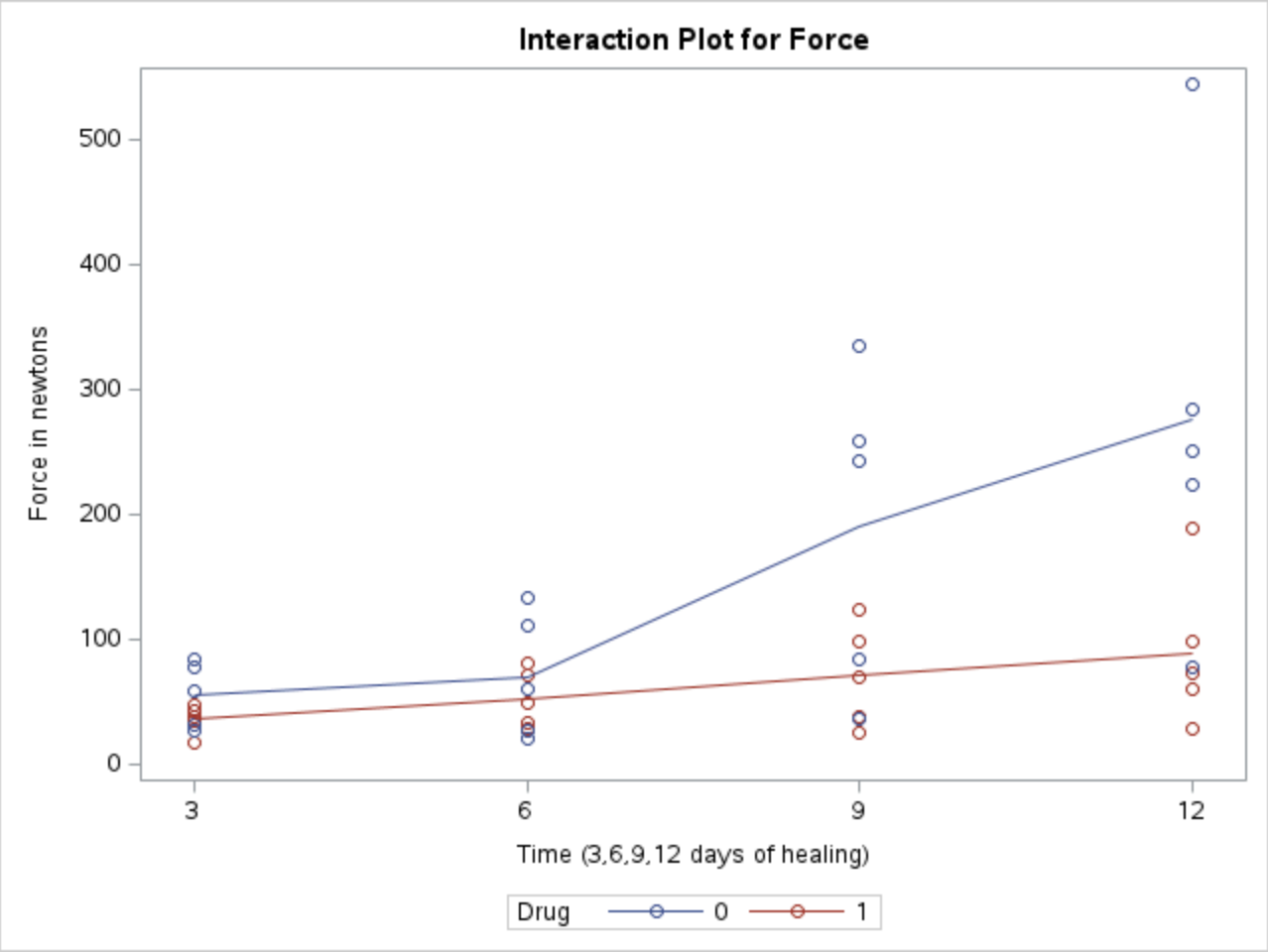
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	7	244827.0590	34975.2941	5.23	0.0005
Error	32	213945.6960	6685.8030		
Corrected Total	39	458772.7550			

R-Square	Coeff Var	Root MSE	Force Mean

R-Square	Coeff Var	Root MSE	Force Mean
0.533656	77.48568	81.76676	105.5250

Source	DF	Type I SS	Mean Square	F Value	Pr > F
Time	3	120516.2090	40172.0697	6.01	0.0023
Drug	1	73822.4640	73822.4640	11.04	0.0022
Time*Drug	3	50488.3860	16829.4620	2.52	0.0757

Source	DF	Type III SS	Mean Square	F Value	Pr > F
Time	3	120516.2090	40172.0697	6.01	0.0023
Drug	1	73822.4640	73822.4640	11.04	0.0022
Time*Drug	3	50488.3860	16829.4620	2.52	0.0757



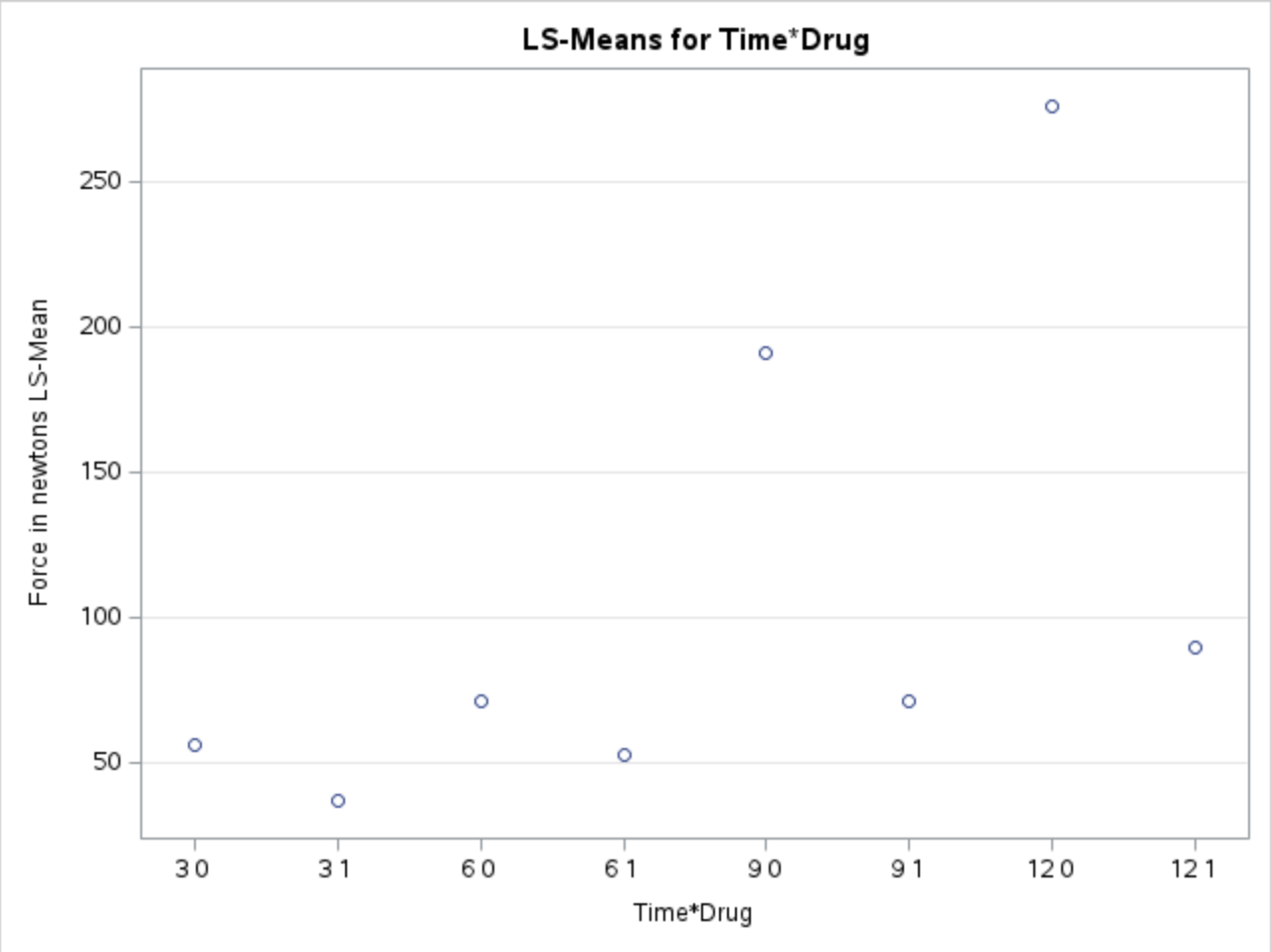
Bunnies Data

Two way ANOVA

The GLM Procedure
Least Squares Means

Time	Drug	Force LSMEAN
3	0	56.220000
3	1	36.620000
6	0	70.680000
6	1	52.620000

Time	Drug	Force LSMEAN
9	0	191.180000
9	1	71.260000
12	0	275.860000
12	1	89.760000

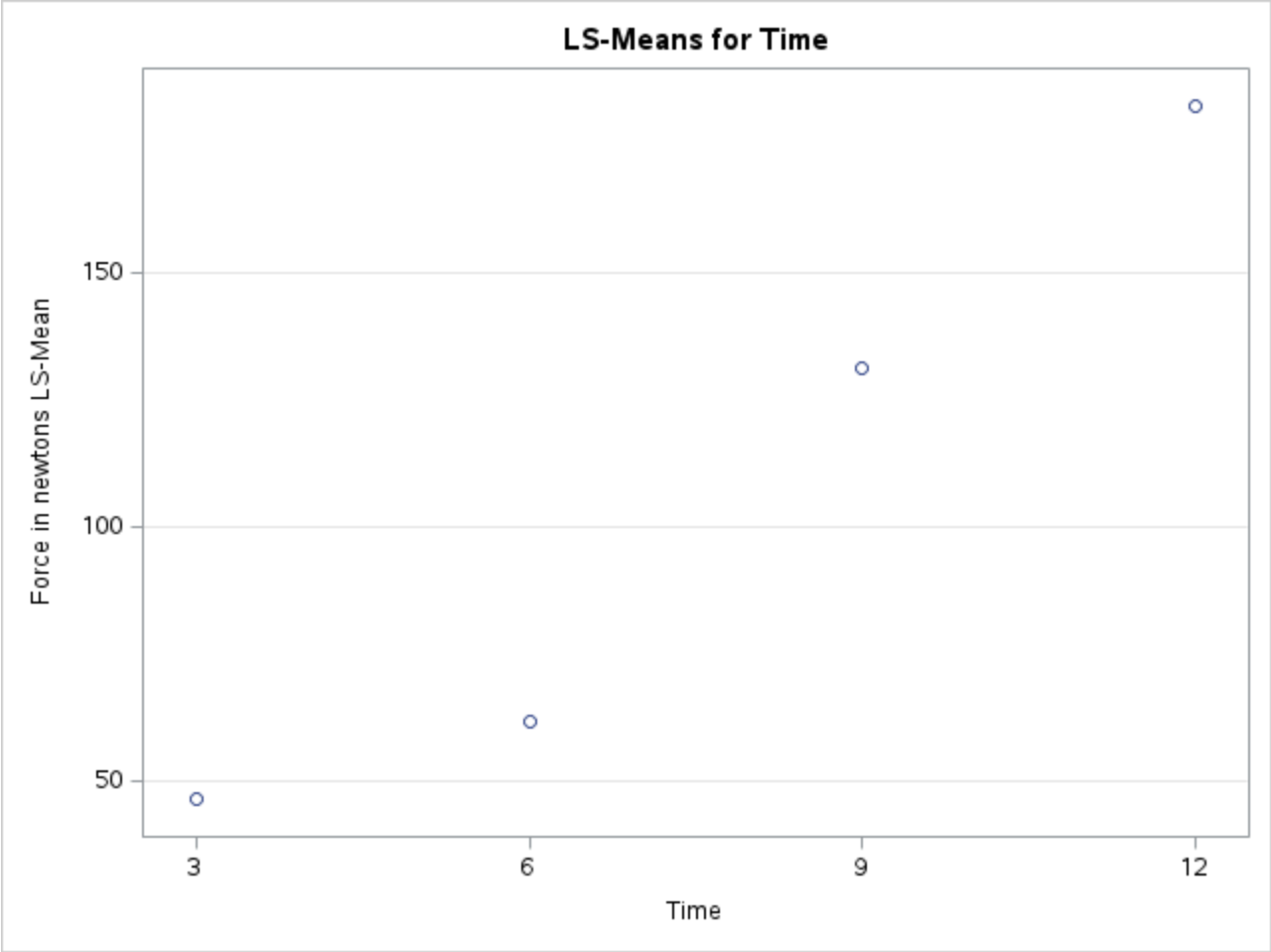


Bunnies Data

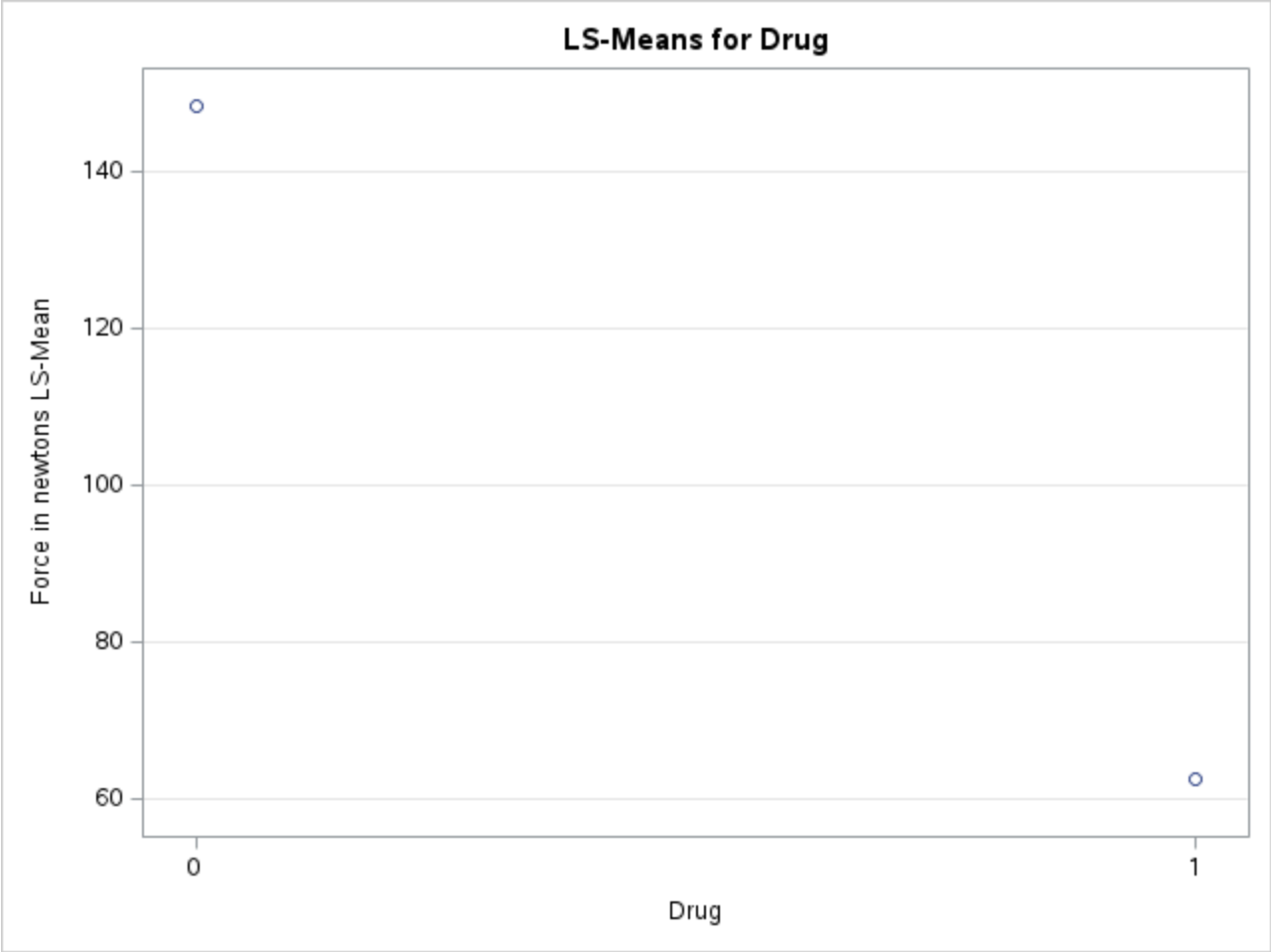
Two way ANOVA

The GLM Procedure
Least Squares Means

Time	Force LSMEAN
3	46.420000
6	61.650000
9	131.220000
12	182.810000



Drug	Force LSMEAN
0	148.485000
1	62.565000



Bunnies Data

Proportion of remaining variation when removing:

time	drug	interaction	overall
0.3276395	0.2298085	0.1696589	0.4973509

Bunnies Data

testing effectiveness of drug on different days

The REG Procedure
Model: MODEL1
Dependent Variable: Force Force in newtons

Number of Observations Read	40
Number of Observations Used	40

Note: No intercept in model. R-Square is redefined.

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	8	690248	86281	12.91	<.0001
Error	32	213946	6685.80300		

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Uncorrected Total	40	904194			

Root MSE	81.76676	R-Square	0.7634
Dependent Mean	105.52500	Adj R-Sq	0.7042
Coeff Var	77.48568		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > |t|
mu11	day 3 drug	1	36.62000	36.56721	1.00	0.3241
mu12	day 6 drug	1	52.62000	36.56721	1.44	0.1599
mu13	day 9 drug	1	71.26000	36.56721	1.95	0.0601
mu14	day 12 drug	1	89.76000	36.56721	2.45	0.0197
mu21	day 3 placebo	1	56.22000	36.56721	1.54	0.1340
mu22	day 6 placebo	1	70.68000	36.56721	1.93	0.0621
mu23	day 9 placebo	1	191.18000	36.56721	5.23	<.0001
mu24	day 12 placebo	1	275.86000	36.56721	7.54	<.0001

Bunnies Data

testing effectiveness of drug on different days

The REG Procedure
Model: MODEL1

Test Overall Results for Dependent Variable Force				
Source	DF	Mean Square	F Value	Pr > F
Numerator	7	34975	5.23	0.0005
Denominator	32	6685.80300		

Bunnies Data

testing effectiveness of drug on different days

The REG Procedure
Model: MODEL1

Test day3 Results for Dependent Variable Force				
Source	DF	Mean Square	F Value	Pr > F
Numerator	1	960.40000	0.14	0.7072
Denominator	32	6685.80300		

Bunnies Data

testing effectiveness of drug on different days

The REG Procedure
Model: MODEL1

Test day6 Results for Dependent Variable Force				
Source	DF	Mean Square	F Value	Pr > F
Numerator	1	815.40900	0.12	0.7292
Denominator	32	6685.80300		

Bunnies Data

testing effectiveness of drug on different days

The REG Procedure
Model: MODEL1

Test day9 Results for Dependent Variable Force				
Source	DF	Mean Square	F Value	Pr > F
Numerator	1	35952	5.38	0.0269
Denominator	32	6685.80300		

Bunnies Data

testing effectiveness of drug on different days

The REG Procedure
Model: MODEL1

Test day12 Results for Dependent Variable Force				
Source	DF	Mean Square	F Value	Pr > F
Numerator	1	86583	12.95	0.0011
Denominator	32	6685.80300		

Bunnies Data

Non parametric test for force

The Multtest Procedure

Model Information	
Test for continuous variables	Mean t-test
Degrees of Freedom Method	Pooled
Tails for continuous tests	Two-tailed
Strata weights	None
P-value adjustment	Permutation
Center continuous variables	No
Number of resamples	20000
Seed	658937316

Contrast Coefficients									
		combo							
Contrast		11	12	13	14	21	22	23	24
Drug day 3	Centered	1	0	0	0	-1	0	0	0
Drug day 6	Centered	0	1	0	0	0	-1	0	0

Contrast Coefficients									
		combo							
Contrast		11	12	13	14	21	22	23	24
Drug day 9	Centered	0	0	1	0	0	0	-1	0
Drug day 12	Centered	0	0	0	1	0	0	0	-1

Continuous Variable Tabulations				
Variable	combo	NumObs	Mean	Standard Deviation
Force	11	5	36.6200	11.1813
Force	12	5	52.6200	22.7982
Force	13	5	71.2600	40.9520
Force	14	5	89.7600	60.6062
Force	21	5	56.2200	26.0708
Force	22	5	70.6800	49.8100
Force	23	5	191.1800	125.5112
Force	24	5	275.8600	169.0494

p-Values			
Variable	Contrast	Raw	Permutation
Force	Drug day 3	0.7072	0.9933
Force	Drug day 6	0.7292	0.9948
Force	Drug day 9	0.0269	0.1105
Force	Drug day 12	0.0011	0.0062