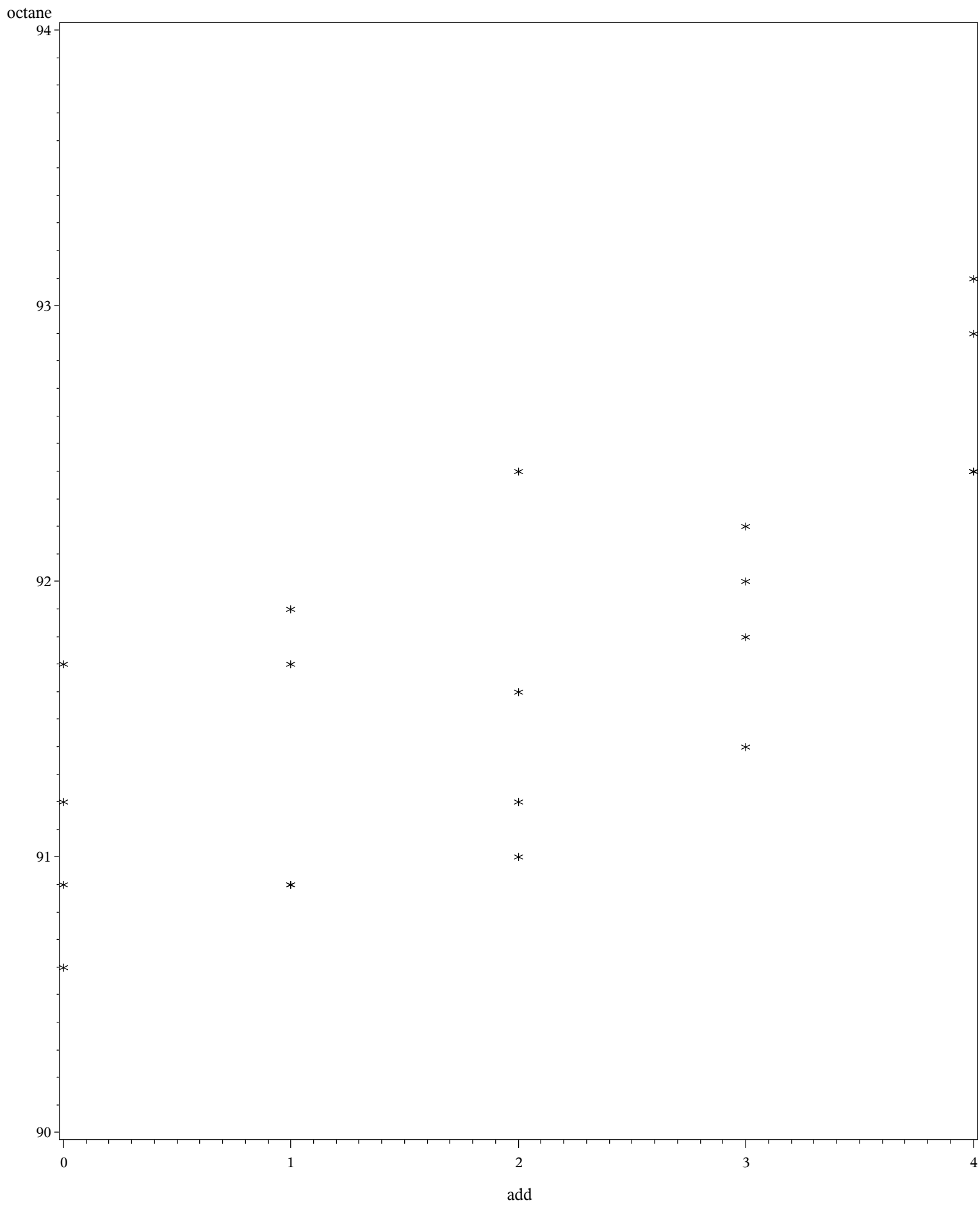


Gasoline Additive Data

Obs	add	octane
1	0	91.7
2	0	91.2
3	0	90.9
4	0	90.6
5	1	91.7
6	1	91.9
7	1	90.9
8	1	90.9
9	2	92.4
10	2	91.2
11	2	91.6
12	2	91.0
13	3	91.8
14	3	92.2
15	3	92.0
16	3	91.4
17	4	93.1
18	4	92.9
19	4	92.4
20	4	92.4

Plot of observed octane measurements at each level of additive



The GLM Procedure

Class Level Information		
Class	Levels	Values
add	5	0 1 2 3 4

Number of Observations Read	20
Number of Observations Used	20

The GLM Procedure

Dependent Variable: octane

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	6.10800000	1.52700000	6.80	0.0025
Error	15	3.37000000	0.22466667		
Corrected Total	19	9.47800000			

R-Square	Coeff Var	Root MSE	octane Mean
0.644440	0.516836	0.473990	91.71000

Source	DF	Type I SS	Mean Square	F Value	Pr > F
add	4	6.10800000	1.52700000	6.80	0.0025

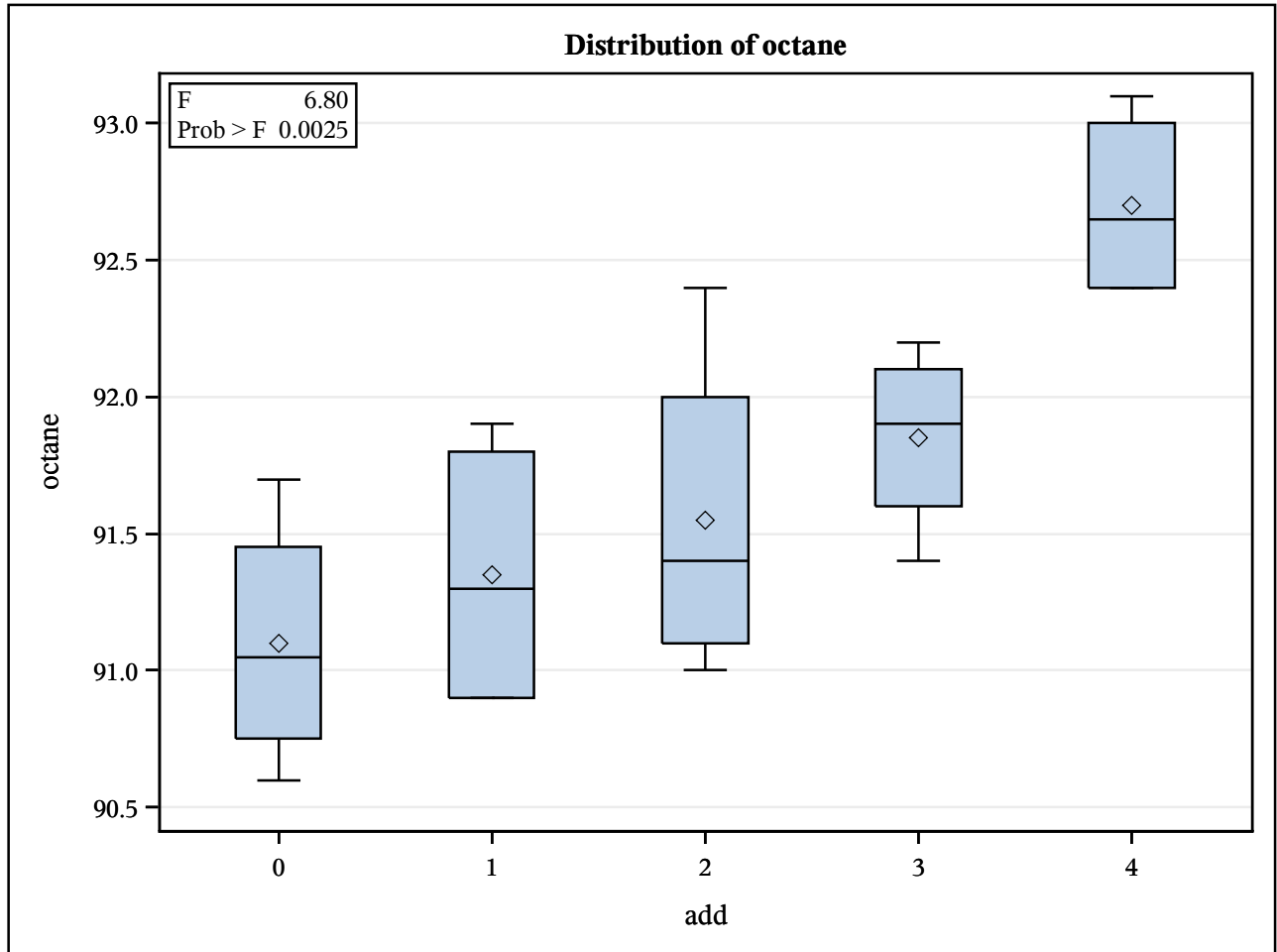
Source	DF	Type III SS	Mean Square	F Value	Pr > F
add	4	6.10800000	1.52700000	6.80	0.0025

Contrast	DF	Contrast SS	Mean Square	F Value	Pr > F
linear additive - 1	1	5.47600000	5.47600000	24.37	0.0002
linear additive - 2	1	5.47600000	5.47600000	24.37	0.0002
quadratic additive	1	0.48285714	0.48285714	2.15	0.1633
cubic additive	1	0.14400000	0.14400000	0.64	0.4359
quartic additive	1	0.00514286	0.00514286	0.02	0.8818
nonlinear additive	3	0.63200000	0.21066667	0.94	0.4470

Parameter	Estimate	Standard Error	t Value	Pr > t	95% Confidence Limits	
control grp mean	91.1000000	0.23699508	384.40	<.0001	90.5948570	91.6051430

The GLM Procedure

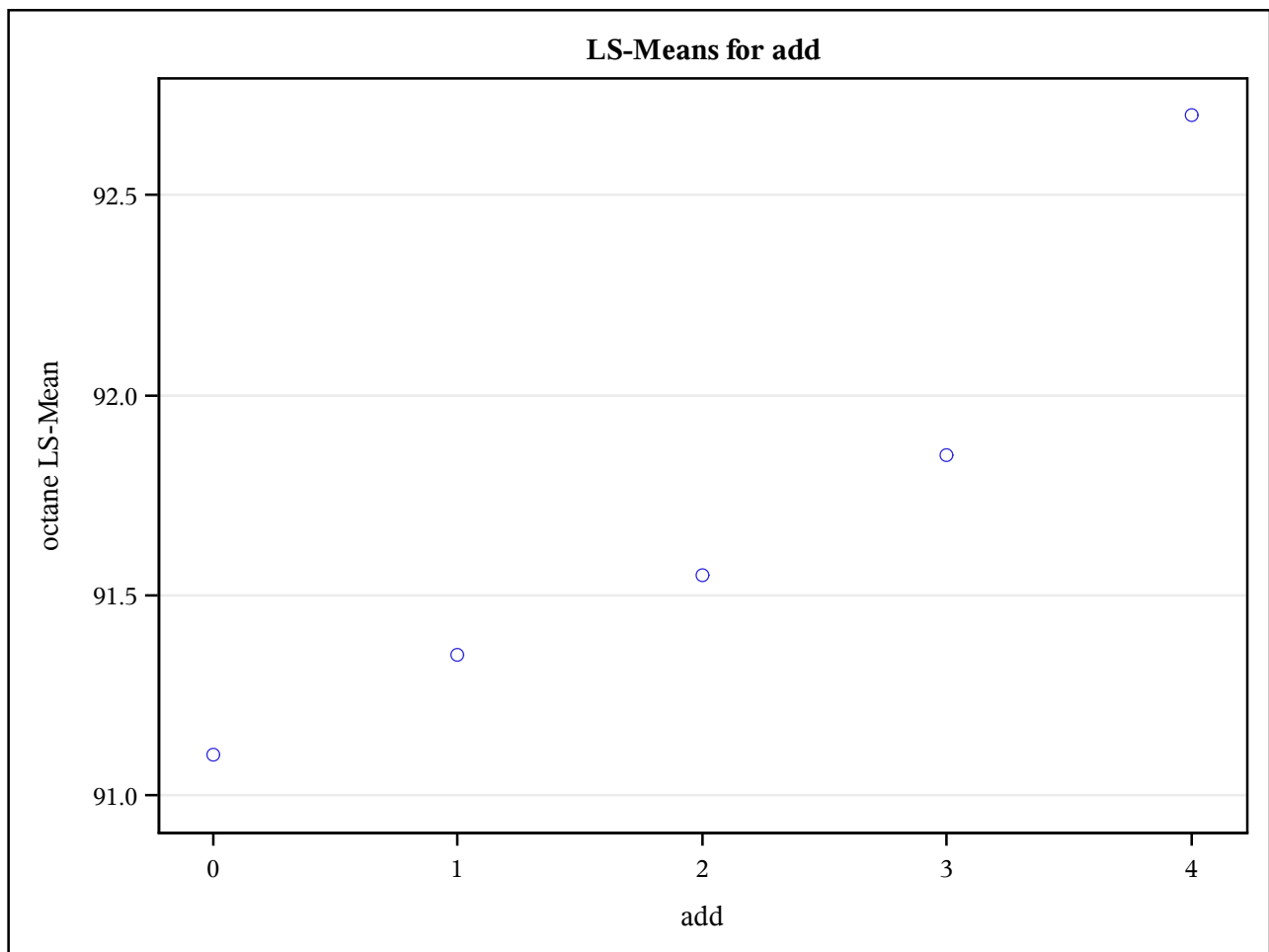
Dependent Variable: octane



***The GLM Procedure
Least Squares Means***

add	octane LSMEAN
0	91.1000000
1	91.3500000
2	91.5500000
3	91.8500000
4	92.7000000

add	octane LSMEAN	95% Confidence Limits	
0	91.100000	90.594857	91.605143
1	91.350000	90.844857	91.855143
2	91.550000	91.044857	92.055143
3	91.850000	91.344857	92.355143
4	92.700000	92.194857	93.205143



The REG Procedure
Model: MODEL1
Dependent Variable: octane

Number of Observations Read	20
Number of Observations Used	20

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	5.47600	5.47600	24.63	0.0001
Error	18	4.00200	0.22233		
Corrected Total	19	9.47800			

Root MSE	0.47152	R-Square	0.5778
Dependent Mean	91.71000	Adj R-Sq	0.5543
Coeff Var	0.51414		

Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	1	90.97000	0.18262	498.14	<.0001
add	1	0.37000	0.07455	4.96	0.0001