

**SAS Program for CRAC Design-HOUSE\_PRICES**

Obs	GRADE	FLOORS	BEDROOMS	SQFT_LIVING	PRICE
1	7	1	2	1160	468000
2	7	1	2	1200	189000
3	7	1	2	1070	252700
4	7	1	2	1980	585000
5	7	1	2	2020	355000
6	7	1	3	1180	221900
7	7	1	3	1060	291850
8	7	1	3	1780	229500
9	7	1	3	1370	400000
10	7	1	3	1250	230000
11	7	1	4	1960	604000
12	7	1	4	1620	385000
13	7	1	4	2060	322500
14	7	1	4	1220	240000
15	7	1	4	1760	380000
16	7	1.5	2	1430	455000
17	7	1.5	2	1420	592500
18	7	1.5	2	1490	625000
19	7	1.5	2	2130	730000
20	7	1.5	2	1100	450000
21	7	1.5	3	1430	310000
22	7	1.5	3	2770	317625
23	7	1.5	3	1980	555000
24	7	1.5	3	1670	460000
25	7	1.5	3	1110	560000
26	7	1.5	4	1600	485000
27	7	1.5	4	2330	687500
28	7	1.5	4	2750	571000
29	7	1.5	4	1610	535000
30	7	1.5	4	2100	445000
31	7	2	2	1610	215000
32	7	2	2	1030	335000
33	7	2	2	2420	430000
34	7	2	2	1050	163500
35	7	2	2	1450	655000
36	7	2	3	2570	538000
37	7	2	3	1715	257500

## SAS Program for CRAC Design-HOUSE\_PRICES

Obs	GRADE	FLOORS	BEDROOMS	SQFT_LIVING	PRICE
38	7	2	3	1890	323000
39	7	2	3	1890	395000
40	7	2	3	1570	685000
41	7	2	4	2250	292500
42	7	2	4	2240	287000
43	7	2	4	1900	360000
44	7	2	4	1980	243500
45	7	2	4	2070	430000
46	8	1	2	1240	188500
47	8	1	2	3900	1072000
48	8	1	2	1320	467000
49	8	1	2	1510	479950
50	8	1	2	1420	641000
51	8	1	3	1680	510000
52	8	1	3	3560	662500
53	8	1	3	2150	650000
54	8	1	3	1680	356000
55	8	1	3	1580	430000
56	8	1	4	4220	775000
57	8	1	4	2160	260000
58	8	1	4	2010	660500
59	8	1	4	2590	452000
60	8	1	4	2030	500000
61	8	1.5	2	1410	439900
62	8	1.5	2	1600	672324
63	8	1.5	2	2700	1260000
64	8	1.5	2	1750	575000
65	8	1.5	2	1700	710000
66	8	1.5	3	1400	667000
67	8	1.5	3	1090	535000
68	8	1.5	3	2300	696000
69	8	1.5	3	1660	780000
70	8	1.5	3	1180	610000
71	8	1.5	4	2750	1450000
72	8	1.5	4	2370	834000
73	8	1.5	4	2610	1000000
74	8	1.5	4	1820	1010000

**SAS Program for CRAC Design-HOUSE\_PRICES**

Obs	GRADE	FLOORS	BEDROOMS	SQFT_LIVING	PRICE
75	8	1.5	4	2440	780000
76	8	2	2	1230	490000
77	8	2	2	1400	372500
78	8	2	2	1270	531000
79	8	2	2	1180	419000
80	8	2	2	1370	359000
81	8	2	3	2450	329000
82	8	2	3	2450	937000
83	8	2	3	2320	580500
84	8	2	3	3160	488000
85	8	2	3	2420	301000
86	8	2	4	2570	719000
87	8	2	4	2360	640000
88	8	2	4	2620	605000
89	8	2	4	1850	430000
90	8	2	4	2380	360000
91	9	1	2	2680	775000
92	9	1	2	1880	460000
93	9	1	2	3570	835000
94	9	1	2	1670	539950
95	9	1	2	1910	435000
96	9	1	3	3050	2000000
97	9	1	3	2753	1350000
98	9	1	3	2370	790000
99	9	1	3	2930	559900
100	9	1	3	2500	662000
101	9	1	4	2480	840000
102	9	1	4	2240	592500
103	9	1	4	3650	2400000
104	9	1	4	1710	749000
105	9	1	4	3140	578000
106	9	1.5	2	2360	1087500
107	9	1.5	2	2460	1370000
108	9	1.5	2	1590	850000
109	9	1.5	2	2320	1150000
110	9	1.5	2	1410	399900
111	9	1.5	3	2070	850830

**SAS Program for CRAC Design-HOUSE\_PRICES**

Obs	GRADE	FLOORS	BEDROOMS	SQFT_LIVING	PRICE
112	9	1.5	3	3950	784000
113	9	1.5	3	2170	876650
114	9	1.5	3	2730	1338750
115	9	1.5	3	2350	339000
116	9	1.5	4	2050	740000
117	9	1.5	4	5450	610000
118	9	1.5	4	3190	1249000
119	9	1.5	4	3040	870000
120	9	1.5	4	3160	1280000
121	9	2	2	1070	259950
122	9	2	2	1780	935000
123	9	2	2	1590	409900
124	9	2	2	2540	945000
125	9	2	2	1295	487028
126	9	2	3	2140	940000
127	9	2	3	2770	461000
128	9	2	3	2320	437500
129	9	2	3	2910	770000
130	9	2	3	2714	465000
131	9	2	4	2950	650000
132	9	2	4	2570	625000
133	9	2	4	2290	785000
134	9	2	4	2830	885000
135	9	2	4	3230	480000

**SAS Program for CRAC Design-HOUSE\_PRICES****The GLM Procedure**

Class Level Information		
Class	Levels	Values
GRADE	3	7 8 9
BEDROOMS	3	2 3 4

Number of Observations Read	135
Number of Observations Used	135

## SAS Program for CRAC Design-HOUSE\_PRICES

## The GLM Procedure

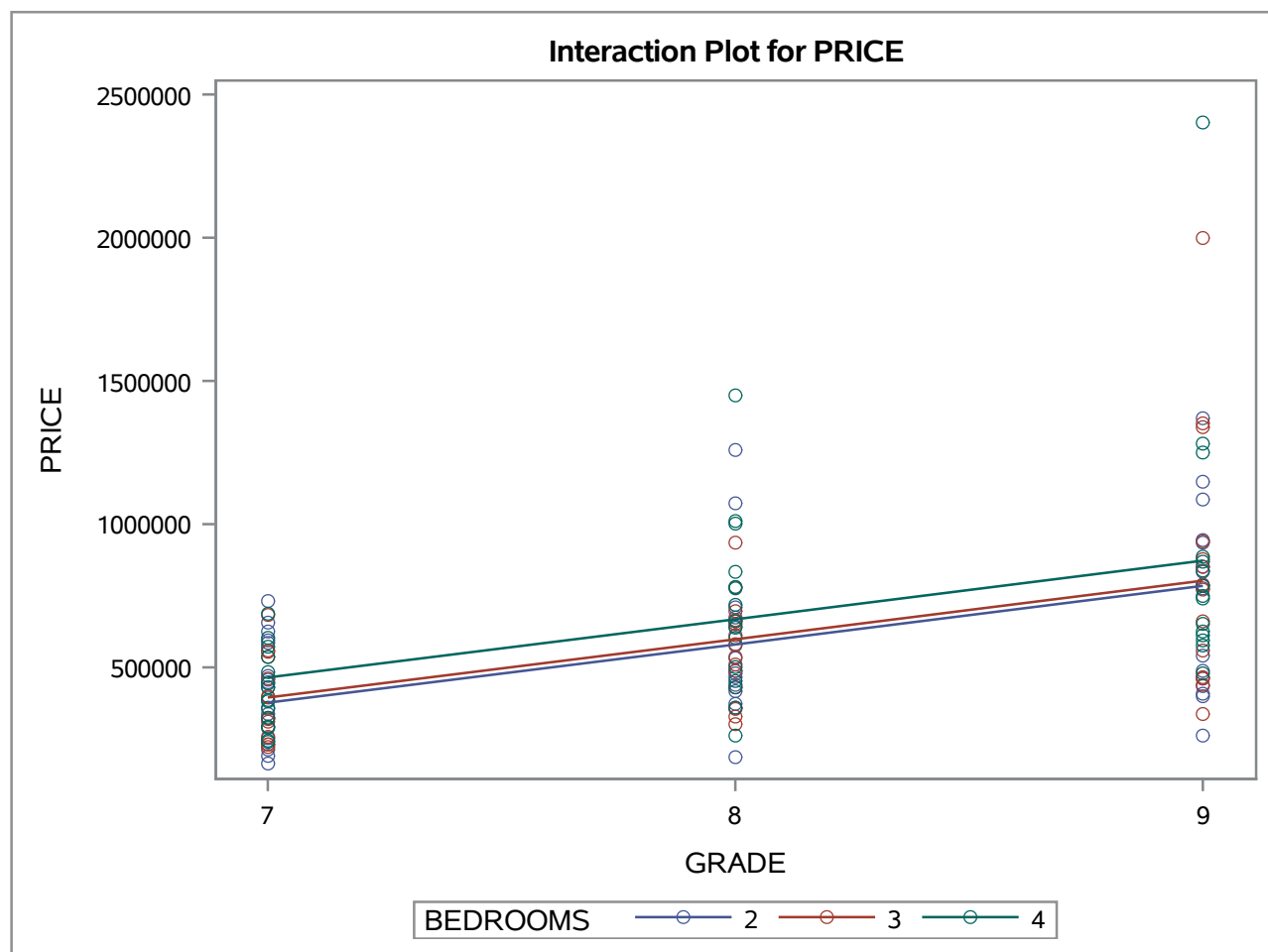
Dependent Variable: PRICE PRICE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3.9375007E12	984375181497	11.30	<.0001
Error	130	1.1327833E13	87137174997		
Corrected Total	134	1.5265333E13			

R-Square	Coeff Var	Root MSE	PRICE Mean
0.257937	47.94058	295190.1	615741.5

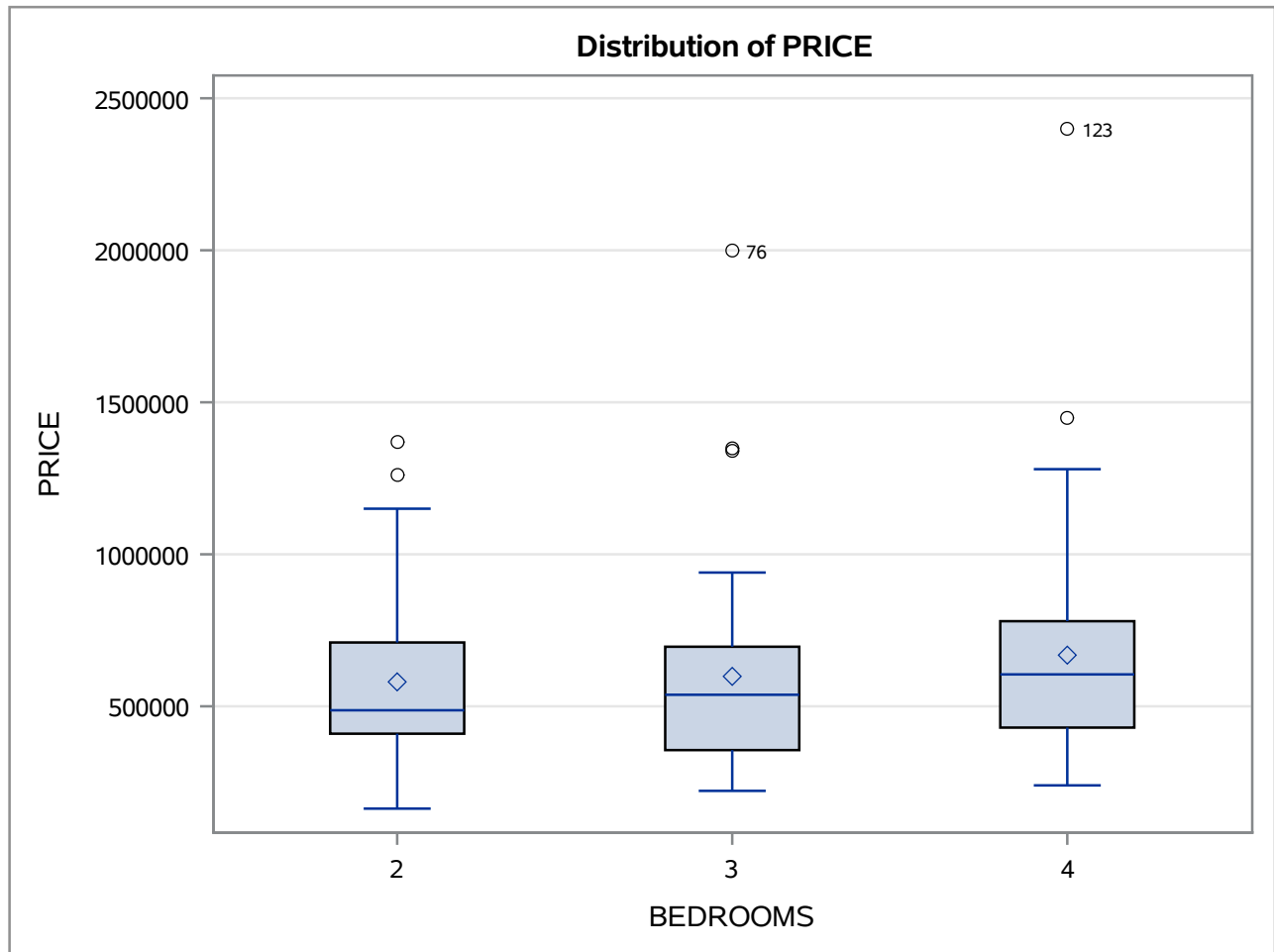
Source	DF	Type I SS	Mean Square	F Value	Pr > F
GRADE	2	3.7431265E12	1.8715633E12	21.48	<.0001
BEDROOMS	2	194374183732	97187091866	1.12	0.3309

Source	DF	Type III SS	Mean Square	F Value	Pr > F
GRADE	2	3.7431265E12	1.8715633E12	21.48	<.0001
BEDROOMS	2	194374183732	97187091866	1.12	0.3309



## SAS Program for CRAC Design-HOUSE\_PRICES

## The GLM Procedure



# SAS Program for CRAC Design-HOUSE\_PRICES

## The GLM Procedure

### Ryan-Einot-Gabriel-Welsch Multiple Range Test for PRICE

**Note:** This test controls the Type I experimentwise error rate.

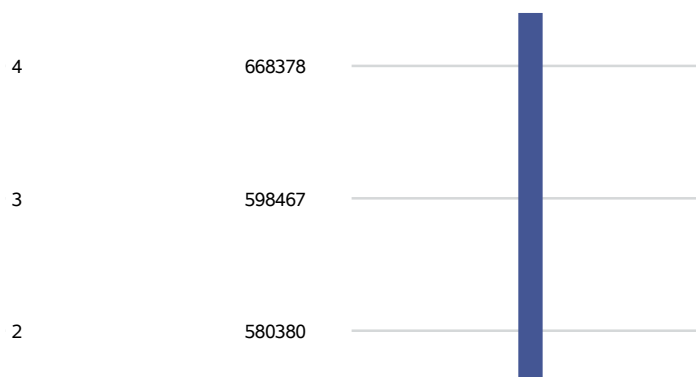
Alpha	0.05
Error Degrees of Freedom	130
Error Mean Square	8.714E10

Number of Means	2	3
Critical Range	123117.65	147542.33

### PRICE REGWQ Grouping for Means of BEDROOMS (Alpha = 0.05)

Means covered by the same bar are not significantly different.

**BEDROOMS      Estimate**





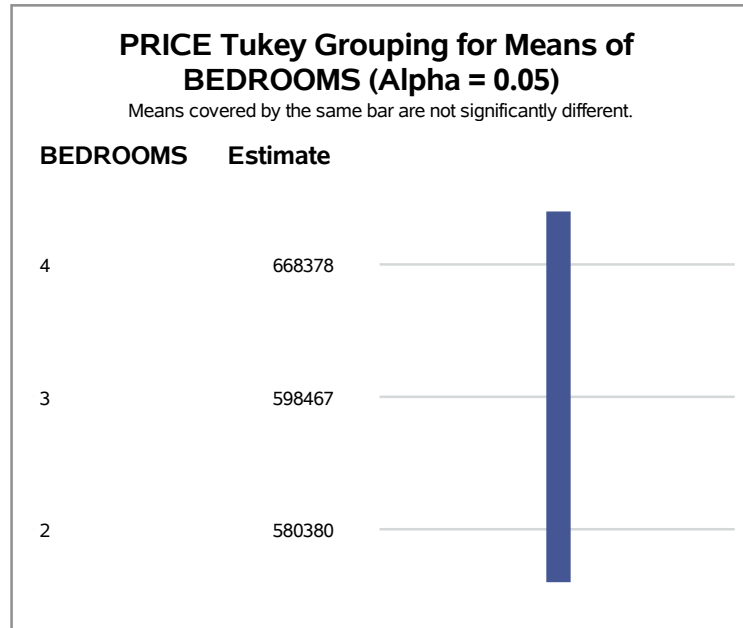
# SAS Program for CRAC Design-HOUSE\_PRICES

## The GLM Procedure

### Tukey's Studentized Range (HSD) Test for PRICE

**Note:** This test controls the Type I experimentwise error rate, but it generally has a higher Type II error rate than REGWQ.

Alpha	0.05
Error Degrees of Freedom	130
Error Mean Square	8.714E10
Critical Value of Studentized Range	3.35290
Minimum Significant Difference	147542



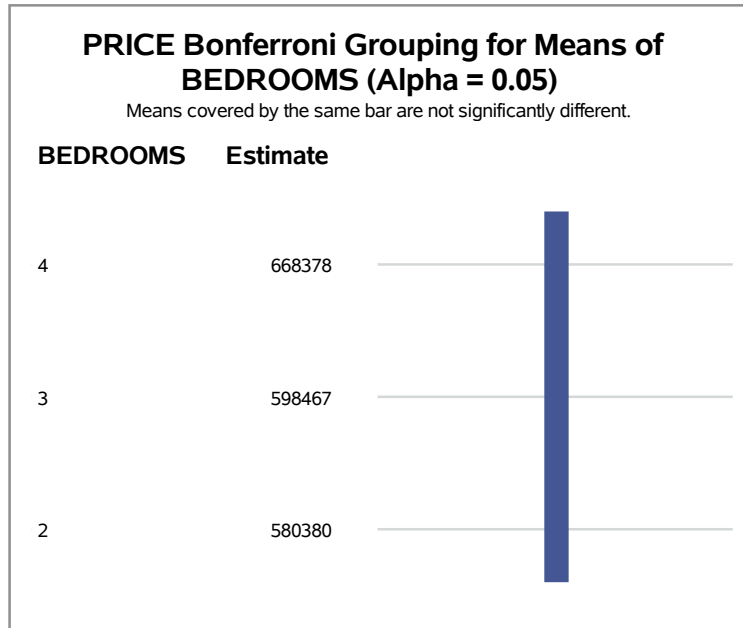
# SAS Program for CRAC Design-HOUSE\_PRICES

## The GLM Procedure

### Bonferroni (Dunn) t Tests for PRICE

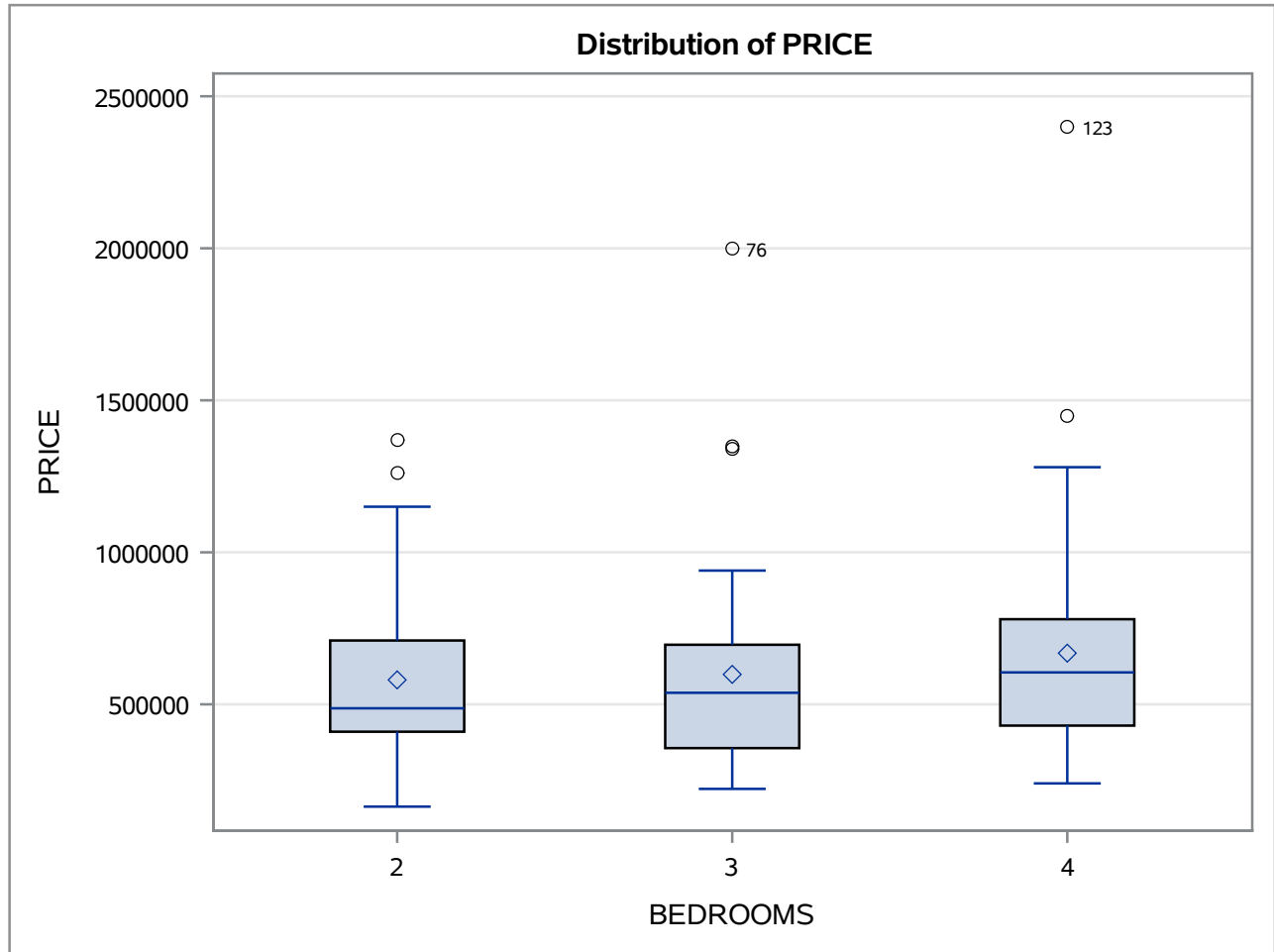
**Note:** This test controls the Type I experimentwise error rate, but it generally has a higher Type II error rate than REGWQ.

Alpha	0.05
Error Degrees of Freedom	130
Error Mean Square	8.714E10
Critical Value of t	2.42535
Minimum Significant Difference	150934



## SAS Program for CRAC Design-HOUSE\_PRICES

## The GLM Procedure



Level of BEDROOMS	N	PRICE	
		Mean	Std Dev
2	45	580380.044	289360.996
3	45	598466.778	336714.123
4	45	668377.778	381333.995

## SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=2 GRADE=7

Moments			
<b>N</b>	15	<b>Sum Weights</b>	15
<b>Mean</b>	433380	<b>Sum Observations</b>	6500700
<b>Std Deviation</b>	179839.695	<b>Variance</b>	3.23423E10
<b>Skewness</b>	-0.0057963	<b>Kurtosis</b>	-1.141178
<b>Uncorrected SS</b>	3.27007E12	<b>Corrected SS</b>	4.52792E11
<b>Coeff Variation</b>	41.4969992	<b>Std Error Mean</b>	46434.4097

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	433380.0	<b>Std Deviation</b>	179840
<b>Median</b>	450000.0	<b>Variance</b>	3.23423E10
<b>Mode</b>	.	<b>Range</b>	566500
		<b>Interquartile Range</b>	339800

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	9.333165	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	7.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	60	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	730000
<b>99%</b>	730000
<b>95%</b>	730000
<b>90%</b>	655000
<b>75% Q3</b>	592500
<b>50% Median</b>	450000
<b>25% Q1</b>	252700
<b>10%</b>	189000
<b>5%</b>	163500
<b>1%</b>	163500
<b>0% Min</b>	163500

# SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=2 GRADE=7

Extreme Observations							
Lowest				Highest			
Value	BEDROOMS	GRADE	Obs	Value	BEDROOMS	GRADE	Obs
163500	2	7	14	585000	2	7	4
189000	2	7	2	592500	2	7	7
215000	2	7	11	625000	2	7	8
252700	2	7	3	655000	2	7	15
335000	2	7	12	730000	2	7	9

## SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=2 GRADE=8

Moments			
<b>N</b>	15	<b>Sum Weights</b>	15
<b>Mean</b>	578478.267	<b>Sum Observations</b>	8677174
<b>Std Deviation</b>	274850.284	<b>Variance</b>	7.55427E10
<b>Skewness</b>	1.39573379	<b>Kurtosis</b>	2.08527333
<b>Uncorrected SS</b>	6.07715E12	<b>Corrected SS</b>	1.0576E12
<b>Coeff Variation</b>	47.5126378	<b>Std Error Mean</b>	70966.0381

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	578478.3	<b>Std Deviation</b>	274850
<b>Median</b>	490000.0	<b>Variance</b>	7.55427E10
<b>Mode</b>	.	<b>Range</b>	1071500
		<b>Interquartile Range</b>	253324

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	8.15148	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	7.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	60	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	1260000
<b>99%</b>	1260000
<b>95%</b>	1260000
<b>90%</b>	1072000
<b>75% Q3</b>	672324
<b>50% Median</b>	490000
<b>25% Q1</b>	419000
<b>10%</b>	359000
<b>5%</b>	188500
<b>1%</b>	188500
<b>0% Min</b>	188500

**SAS Program for CRAC Design-HOUSE\_PRICES**

**The UNIVARIATE Procedure**  
**Variable: PRICE (PRICE)**

**BEDROOMS=2 GRADE=8**

Extreme Observations							
Lowest				Highest			
Value	BEDROOMS	GRADE	Obs	Value	BEDROOMS	GRADE	Obs
188500	2	8	16	641000	2	8	20
359000	2	8	30	672324	2	8	22
372500	2	8	27	710000	2	8	25
419000	2	8	29	1072000	2	8	17
439900	2	8	21	1260000	2	8	23

## SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=2 GRADE=9

Moments			
<b>N</b>	15	<b>Sum Weights</b>	15
<b>Mean</b>	729281.867	<b>Sum Observations</b>	10939228
<b>Std Deviation</b>	329171.572	<b>Variance</b>	1.08354E11
<b>Skewness</b>	0.38712644	<b>Kurtosis</b>	-0.8788731
<b>Uncorrected SS</b>	9.49474E12	<b>Corrected SS</b>	1.51695E12
<b>Coeff Variation</b>	45.1363988	<b>Std Error Mean</b>	84991.7344

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	729281.9	<b>Std Deviation</b>	329172
<b>Median</b>	775000.0	<b>Variance</b>	1.08354E11
<b>Mode</b>	.	<b>Range</b>	1110050
		<b>Interquartile Range</b>	510000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	8.580621	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	7.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	60	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	1370000
<b>99%</b>	1370000
<b>95%</b>	1370000
<b>90%</b>	1150000
<b>75% Q3</b>	945000
<b>50% Median</b>	775000
<b>25% Q1</b>	435000
<b>10%</b>	399900
<b>5%</b>	259950
<b>1%</b>	259950
<b>0% Min</b>	259950



# SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=2 GRADE=9

Extreme Observations							
Lowest				Highest			
Value	BEDROOMS	GRADE	Obs	Value	BEDROOMS	GRADE	Obs
259950	2	9	41	935000	2	9	42
399900	2	9	40	945000	2	9	44
409900	2	9	43	1087500	2	9	36
435000	2	9	35	1150000	2	9	39
460000	2	9	32	1370000	2	9	37

## SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=3 GRADE=7

Moments			
<b>N</b>	15	<b>Sum Weights</b>	15
<b>Mean</b>	384958.333	<b>Sum Observations</b>	5774375
<b>Std Deviation</b>	144576.326	<b>Variance</b>	2.09023E10
<b>Skewness</b>	0.69946822	<b>Kurtosis</b>	-0.5666052
<b>Uncorrected SS</b>	2.51553E12	<b>Corrected SS</b>	2.92632E11
<b>Coeff Variation</b>	37.556357	<b>Std Error Mean</b>	37329.4469

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	384958.3	<b>Std Deviation</b>	144576
<b>Median</b>	323000.0	<b>Variance</b>	2.09023E10
<b>Mode</b>	.	<b>Range</b>	463100
		<b>Interquartile Range</b>	280500

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	10.31246	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	7.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	60	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	685000
<b>99%</b>	685000
<b>95%</b>	685000
<b>90%</b>	560000
<b>75% Q3</b>	538000
<b>50% Median</b>	323000
<b>25% Q1</b>	257500
<b>10%</b>	229500
<b>5%</b>	221900
<b>1%</b>	221900
<b>0% Min</b>	221900

# SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=3 GRADE=7

Extreme Observations							
Lowest				Highest			
Value	BEDROOMS	GRADE	Obs	Value	BEDROOMS	GRADE	Obs
221900	3	7	46	460000	3	7	54
229500	3	7	48	538000	3	7	56
230000	3	7	50	555000	3	7	53
257500	3	7	57	560000	3	7	55
291850	3	7	47	685000	3	7	60

## SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=3 GRADE=8

Moments			
<b>N</b>	15	<b>Sum Weights</b>	15
<b>Mean</b>	568800	<b>Sum Observations</b>	8532000
<b>Std Deviation</b>	174868.502	<b>Variance</b>	3.0579E10
<b>Skewness</b>	0.27277046	<b>Kurtosis</b>	-0.0350138
<b>Uncorrected SS</b>	5.28111E12	<b>Corrected SS</b>	4.28106E11
<b>Coeff Variation</b>	30.7434075	<b>Std Error Mean</b>	45150.853

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	568800.0	<b>Std Deviation</b>	174869
<b>Median</b>	580500.0	<b>Variance</b>	3.0579E10
<b>Mode</b>	.	<b>Range</b>	636000
		<b>Interquartile Range</b>	237000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	t	12.59777	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	M	7.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	S	60	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	937000
<b>99%</b>	937000
<b>95%</b>	937000
<b>90%</b>	780000
<b>75% Q3</b>	667000
<b>50% Median</b>	580500
<b>25% Q1</b>	430000
<b>10%</b>	329000
<b>5%</b>	301000
<b>1%</b>	301000
<b>0% Min</b>	301000

# SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=3 GRADE=8

Extreme Observations							
Lowest				Highest			
Value	BEDROOMS	GRADE	Obs	Value	BEDROOMS	GRADE	Obs
301000	3	8	75	662500	3	8	62
329000	3	8	71	667000	3	8	66
356000	3	8	64	696000	3	8	68
430000	3	8	65	780000	3	8	69
488000	3	8	74	937000	3	8	72

## SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=3 GRADE=9

Moments			
<b>N</b>	15	<b>Sum Weights</b>	15
<b>Mean</b>	841642	<b>Sum Observations</b>	12624630
<b>Std Deviation</b>	437837.29	<b>Variance</b>	1.91701E11
<b>Skewness</b>	1.45232681	<b>Kurtosis</b>	2.41271718
<b>Uncorrected SS</b>	1.33092E13	<b>Corrected SS</b>	2.68382E12
<b>Coeff Variation</b>	52.0217966	<b>Std Error Mean</b>	113049.102

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	841642.0	<b>Std Deviation</b>	437837
<b>Median</b>	784000.0	<b>Variance</b>	1.91701E11
<b>Mode</b>	.	<b>Range</b>	1661000
		<b>Interquartile Range</b>	475000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	7.444924	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	7.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	60	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	2000000
<b>99%</b>	2000000
<b>95%</b>	2000000
<b>90%</b>	1350000
<b>75% Q3</b>	940000
<b>50% Median</b>	784000
<b>25% Q1</b>	465000
<b>10%</b>	437500
<b>5%</b>	339000
<b>1%</b>	339000
<b>0% Min</b>	339000

# SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=3 GRADE=9

Extreme Observations							
Lowest				Highest			
Value	BEDROOMS	GRADE	Obs	Value	BEDROOMS	GRADE	Obs
339000	3	9	85	876650	3	9	83
437500	3	9	88	940000	3	9	86
461000	3	9	87	1338750	3	9	84
465000	3	9	90	1350000	3	9	77
559900	3	9	79	2000000	3	9	76

## SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=4 GRADE=7

Moments			
<b>N</b>	15	<b>Sum Weights</b>	15
<b>Mean</b>	417866.667	<b>Sum Observations</b>	6268000
<b>Std Deviation</b>	136211.163	<b>Variance</b>	1.85535E10
<b>Skewness</b>	0.49841414	<b>Kurtosis</b>	-0.6383008
<b>Uncorrected SS</b>	2.87894E12	<b>Corrected SS</b>	2.59749E11
<b>Coeff Variation</b>	32.5968004	<b>Std Error Mean</b>	35169.5711

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	417866.7	<b>Std Deviation</b>	136211
<b>Median</b>	385000.0	<b>Variance</b>	1.85535E10
<b>Mode</b>	.	<b>Range</b>	447500
		<b>Interquartile Range</b>	242500

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	11.88148	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	7.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	60	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	687500
<b>99%</b>	687500
<b>95%</b>	687500
<b>90%</b>	604000
<b>75% Q3</b>	535000
<b>50% Median</b>	385000
<b>25% Q1</b>	292500
<b>10%</b>	243500
<b>5%</b>	240000
<b>1%</b>	240000
<b>0% Min</b>	240000



# SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=4 GRADE=7

Extreme Observations							
Lowest				Highest			
Value	BEDROOMS	GRADE	Obs	Value	BEDROOMS	GRADE	Obs
240000	4	7	94	485000	4	7	96
243500	4	7	104	535000	4	7	99
287000	4	7	102	571000	4	7	98
292500	4	7	101	604000	4	7	91
322500	4	7	93	687500	4	7	97

## SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=4 GRADE=8

Moments			
<b>N</b>	15	<b>Sum Weights</b>	15
<b>Mean</b>	698366.667	<b>Sum Observations</b>	10475500
<b>Std Deviation</b>	301980.514	<b>Variance</b>	9.11922E10
<b>Skewness</b>	0.9568391	<b>Kurtosis</b>	1.48797447
<b>Uncorrected SS</b>	8.59243E12	<b>Corrected SS</b>	1.27669E12
<b>Coeff Variation</b>	43.2409691	<b>Std Error Mean</b>	77971.0335

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	698366.7	<b>Std Deviation</b>	301981
<b>Median</b>	660500.0	<b>Variance</b>	9.11922E10
<b>Mode</b>	.	<b>Range</b>	1190000
		<b>Interquartile Range</b>	382000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	8.956745	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	7.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	60	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	1450000
<b>99%</b>	1450000
<b>95%</b>	1450000
<b>90%</b>	1010000
<b>75% Q3</b>	834000
<b>50% Median</b>	660500
<b>25% Q1</b>	452000
<b>10%</b>	360000
<b>5%</b>	260000
<b>1%</b>	260000
<b>0% Min</b>	260000

# SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=4 GRADE=8

Extreme Observations							
Lowest				Highest			
Value	BEDROOMS	GRADE	Obs	Value	BEDROOMS	GRADE	Obs
260000	4	8	107	780000	4	8	115
360000	4	8	120	834000	4	8	112
430000	4	8	119	1000000	4	8	113
452000	4	8	109	1010000	4	8	114
500000	4	8	110	1450000	4	8	111

## SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=4 GRADE=9

Moments			
<b>N</b>	15	<b>Sum Weights</b>	15
<b>Mean</b>	888900	<b>Sum Observations</b>	13333500
<b>Std Deviation</b>	476412.869	<b>Variance</b>	2.26969E11
<b>Skewness</b>	2.56979574	<b>Kurtosis</b>	7.56727698
<b>Uncorrected SS</b>	1.50297E13	<b>Corrected SS</b>	3.17757E12
<b>Coeff Variation</b>	53.5957778	<b>Std Error Mean</b>	123009.274

Basic Statistical Measures			
Location		Variability	
<b>Mean</b>	888900.0	<b>Std Deviation</b>	476413
<b>Median</b>	749000.0	<b>Variance</b>	2.26969E11
<b>Mode</b>	.	<b>Range</b>	1920000
		<b>Interquartile Range</b>	275000

Tests for Location: Mu0=0				
Test	Statistic		p Value	
<b>Student's t</b>	<b>t</b>	7.226284	<b>Pr &gt;  t </b>	<.0001
<b>Sign</b>	<b>M</b>	7.5	<b>Pr &gt;=  M </b>	<.0001
<b>Signed Rank</b>	<b>S</b>	60	<b>Pr &gt;=  S </b>	<.0001

Quantiles (Definition 5)	
Level	Quantile
<b>100% Max</b>	2400000
<b>99%</b>	2400000
<b>95%</b>	2400000
<b>90%</b>	1280000
<b>75% Q3</b>	885000
<b>50% Median</b>	749000
<b>25% Q1</b>	610000
<b>10%</b>	578000
<b>5%</b>	480000
<b>1%</b>	480000
<b>0% Min</b>	480000

# SAS Program for CRAC Design-HOUSE\_PRICES

The UNIVARIATE Procedure  
Variable: PRICE (PRICE)

BEDROOMS=4 GRADE=9

Extreme Observations							
Lowest				Highest			
Value	BEDROOMS	GRADE	Obs	Value	BEDROOMS	GRADE	Obs
480000	4	9	135	870000	4	9	129
578000	4	9	125	885000	4	9	134
592500	4	9	122	1249000	4	9	128
610000	4	9	127	1280000	4	9	130
625000	4	9	132	2400000	4	9	123