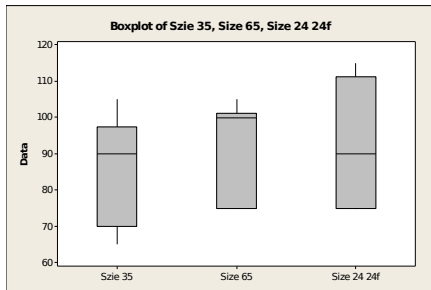


## Tukey Line/Group Plots

4WD SUV	73.5	A	Seattle	66318	A
Large Sedan	69.5	A	San Diego	56470	B A
Minivan	61.4	B A	Denver	46331	C B
Med Sedan	54.0	C B	Chicago	44345	C B
Small Sedan	43.6	C	Dallas	44017	C
			Miami	42368	C



$H_0: \mu_{35} = \mu_{65} = \mu_{24/24f}$

$H_a$ : At least one pair not equal

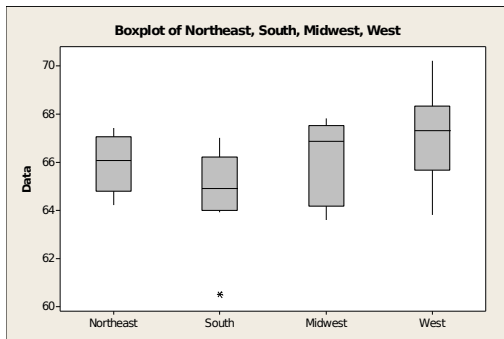
Source	DF	SS	MS	F	P
Factor	2	199	99	0.42	0.666
Error	14	3325	238		
Total	16	3524			

There is not enough evidence ( $F=0.42, p=0.666$ ) to suggest a difference between the costs of the batteries.

Since there are no statistical differences, neither is cheaper.

10.

There is an outlier.



$H_0: \mu_{ne} = \mu_s = \mu_{mw} = \mu_w$

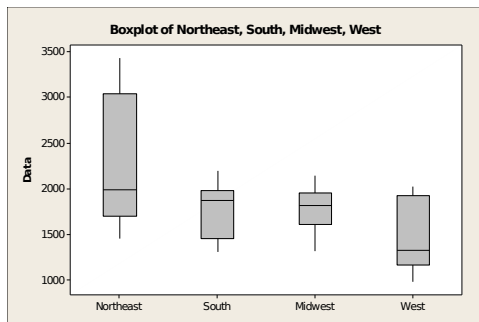
$H_a$ : At least one pair not equal

Source	DF	SS	MS	F	P
Factor	3	13.65	4.55	1.93	0.147
Error	29	68.50	2.36		
Total	32	82.15			

There is not enough evidence ( $F=1.93$ ,  $p=0.147$ ) to suggest a difference in mean well-being index between the regions, after the outlier is removed.

No, people in the northeast do not have a lower well-being index than in the west, since there are not differences.

14



$H_0: \mu_{ne} = \mu_s = \mu_{mw} = \mu_w$

$H_a$ : At least one pair not equal

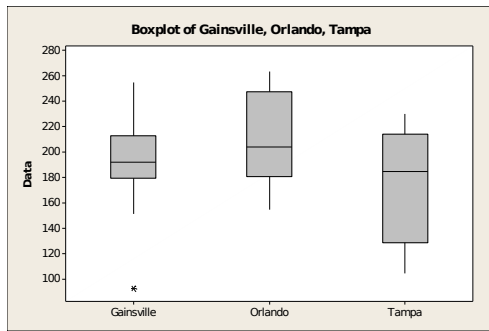
Source	DF	SS	MS	F	P
Factor	3	3112137	1037379	4.29	0.013
Error	29	7017376	241978		
Total	32	10129513			

	N	Mean	Grouping
Northeast	10	2312.0	A
Midwest	9	1786.0	A B
South	7	1755.1	A B
West	7	1491.3	B

There is enough evidence ( $F=4.29$ ,  $p=0.013$ ) to suggest at least one pair of means are different.

The NE, MW, and S spend the most on energy, since they are grouped as being not different

16.



Ho:  $\mu_g = \mu_o = \mu_t$

Ha: At least one pair not equal

Source	DF	SS	MS	F	P
Factor	2	6618	3309	2.34	0.116
Error	27	38227	1416		
Total	29	44845			

There is not enough evidence ( $F=2.34, p=0.116$ ) to suggest a difference between the cities, with the outlier removed. None of the cities have a higher housing price, as there are no differences.