

PROJECT# 241095						
TLW 0323						
DETERMINE IF POI AND GROUP SIZE CHANGE ON A SCOPED M/710 30.06 RIFLE						
OVER A 40 RD FIRING INTERVAL.						
GROUP SIZES						
GUN	SCOPE	AMMO	GROUP#1	GROUP#2	GROUP#3	AVERAGE
B-4	BUSHNELL	REM R30064 180GR	1.372	1.744	1.136	1.4173333
#1						
POI RELATIVE TO POA			GROUP#1	GROUP#2	GROUP#3	AVERAGE
		X	0.09	0.581	0.461	0.3773333
		Y	-0.366	-1.014	-0.748	-0.7093333
GROUP SIZES						
AFTER 20 RDS SHOT FROM SHOULDER			GROUP#1	GROUP#2	GROUP#3	AVERAGE
			1.134	1.602	1.368	1.368
POI RELATIVE TO POA			GROUP#1	GROUP#2	GROUP#3	AVERAGE
AFTER 20 RDS SHOT FROM SHOULDER		X	0.953	1.054	0.413	0.8066667
		Y	-0.961	-1.003	1.125	-1.0296667
GROUP SIZES						
AFTER 40 RDS SHOT FROM SHOULDER			GROUP#1	GROUP#2	GROUP#3	AVERAGE
			1.362	1.303	2.036	1.567
POI RELATIVE TO POA			GROUP#1	GROUP#2	GROUP#3	AVERAGE
AFTER 40 RDS SHOT FROM SHOULDER		X	0.169	0.193	-0.35	0.004
		Y	-1.062	-0.999	-0.903	-0.988
GROUP SIZES						
GUN	SCOPE	AMMO	GROUP#1	GROUP#2	GROUP#3	AVERAGE
B-7	BUSHNELL	REM R30064 180GR	1.266	1.419	1.452	1.379
#2						
POI RELATIVE TO POA			GROUP#1	GROUP#2	GROUP#3	AVERAGE
		X	1.13	1.978	1.905	1.671
		Y	0.2445	0.278	0.352	0.2915
GROUP SIZES						
AFTER 20 RDS SHOT FROM SHOULDER			GROUP#1	GROUP#2	GROUP#3	AVERAGE
			1.335	0.942	1.833	1.37
POI RELATIVE TO POA			GROUP#1	GROUP#2	GROUP#3	AVERAGE
AFTER 20 RDS SHOT FROM SHOULDER		X	2.156	1.985	2.273	2.138
		Y	0.169	0.509	0.512	0.3966667
GROUP SIZES						
AFTER 40 RDS SHOT FROM SHOULDER			GROUP#1	GROUP#2	GROUP#3	AVERAGE
			1.763	1.84	1.373	1.6586667
POI RELATIVE TO POA			GROUP#1	GROUP#2	GROUP#3	AVERAGE
AFTER 40 RDS SHOT FROM SHOULDER		X	2.169	2.852	2.619	2.5466667
		Y	0.505	0.347	0.647	0.4996667

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GROUP SIZES							
GUN	SCOPE	AMMO	GROUP#1	GROUP#2	GROUP#3	AVERAGE	
B-5	TASCO	REM R30064 180GR	2.651	1.029	0.901	1.527	
	#1						
POI RELATIVE TO POA			GROUP#1	GROUP#2	GROUP#3	AVERAGE	
		X	0.05	0.365	0.263	0.226	
		Y	-0.319	-0.233	-0.083	-0.2116667	
GROUP SIZES							
AFTER 20 RDS SHOT FROM SHOULDER			GROUP#1	GROUP#2	GROUP#3	AVERAGE	
			1.759	1.051	0.967	1.259	
POI RELATIVE TO POA			GROUP#1	GROUP#2	GROUP#3	AVERAGE	
AFTER 20 RDS SHOT FROM SHOULDER			X	-0.048	0.175	0.729	0.2853333
		Y	-0.145	0.104	-0.08	-0.0403333	
GROUP SIZES							
AFTER 40 RDS SHOT FROM SHOULDER			GROUP#1	GROUP#2	GROUP#3	AVERAGE	
			2.143	0.642	2.194	1.6596667	
POI RELATIVE TO POA			GROUP#1	GROUP#2	GROUP#3	AVERAGE	
AFTER 40 RDS SHOT FROM SHOULDER			X	1.257	1.248	1.157	1.2206667
		Y	0.031	-0.405	-0.308	-0.2273333	
GROUP SIZES							
GUN	SCOPE	AMMO	GROUP#1	GROUP#2	GROUP#3	AVERAGE	
B-9	TASCO	REM R30064 180GR	1.357	1.215	2.064	1.5453333	
	#2						
POI RELATIVE TO POA			GROUP#1	GROUP#2	GROUP#3	AVERAGE	
		X	0.159	-0.054	0.053	0.0526667	
		Y	0.553	0.54	0.841	0.6446667	
GROUP SIZES							
AFTER 20 RDS SHOT FROM SHOULDER			GROUP#1	GROUP#2	GROUP#3	AVERAGE	
			0.817	2.174	1.342	1.4443333	
POI RELATIVE TO POA			GROUP#1	GROUP#2	GROUP#3	AVERAGE	
AFTER 20 RDS SHOT FROM SHOULDER			X	-0.346	-0.214	-0.29	-0.2833333
		Y	0.514	0.703	1.044	0.7536667	
GROUP SIZES							
AFTER 40 RDS SHOT FROM SHOULDER			GROUP#1	GROUP#2	GROUP#3	AVERAGE	
			1.052	1.259	1.464	1.2583333	
POI RELATIVE TO POA			GROUP#1	GROUP#2	GROUP#3	AVERAGE	
AFTER 40 RDS SHOT FROM SHOULDER			X	0.049	-0.058	-0.356	-0.1216667
		Y	1.282	1.151	0.944	1.1256667	

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Average group sizes was set at $\leq 3''$ at 100 yards.

	BUSHNELL SCOPE		TASCO SCOPE	
rounds	B-4	B-7	B-5	B-9
0	1.417	1.379	1.527	1.545
20	1.368	1.370	1.259	1.444
40	1.567	1.659	1.650	1.258

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Worksheet size: 100000 cells

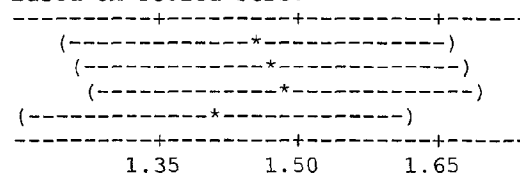
One-way Analysis of Variance

Analysis of Variance

Source	DF	SS	MS	F	P
Factor	3	0.0070	0.0023	0.09	0.961
Error	8	0.1978	0.0247		
Total	11	0.2048			

Individual 95% CIs For Mean
Based on Pooled StDev

Level	N	Mean	StDev
B-4	3	1.4507	0.1037
B-7	3	1.4693	0.1643
B-5	3	1.4787	0.1999
B-9	3	1.4157	0.1456



Pooled StDev = 0.1573

Descriptive Statistics

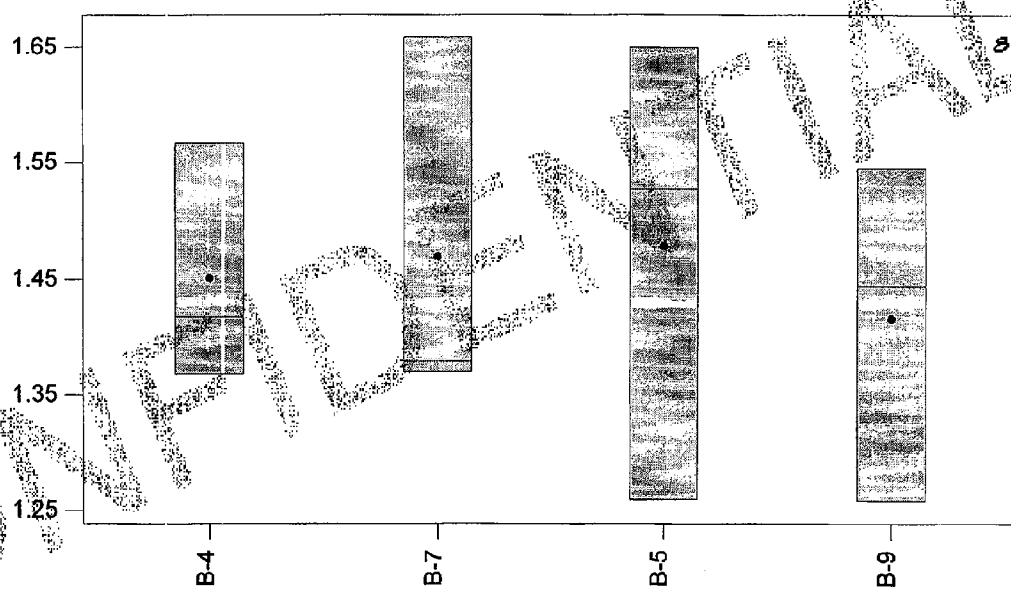
Variable	N	Mean	Median	TrMean	StDev	SE Mean
C6	4	1.4536	1.4600	1.4536	0.0278	0.0139

Variable	Minimum	Maximum	Q1	Q3
C6	1.4157	1.4787	1.4245	1.4764

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Boxplots of B-4 - B-9
(means are indicated by solid circles)



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	C1	C2	C3	C4
	B-4	B-7	B-5	B-9
1	1.417	1.379	1.527	1.545
2	1.368	1.370	1.259	1.444
3	1.567	1.659	1.650	1.258

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