

# Gylling Data Management, Inc.

**Table 1 from M. Friedman. The use of ranks to avoid the assumption of normality implicit in the analysis of variance. Journal of the American Statistical Association, 32(200):675-701, Dec 1937.**  
 Trial ID: Friedman1      Location:      Trial Year: 2019  
 Protocol ID: Friedman1      Investigator: Peter Claussen  
 Project ID: Knowledge Base      Study Director:  
    Sponsor Contact:

Character Rated Rating Data Type Rating Unit ARM Action Codes	SD Income CV DOLLAR IID			SD Income CV DOLLAR AS			SD Income CV DOLLAR AR				
	Trt No.	Treatment Name	1	StDev	Median	2	StDev	Median	3	StDev	Median
	7	2250	84.115 a	68.466	77.575	8.394 a	3.906	77.575	5.929 a	.	77.575
	5	1750	62.134 b	50.385	51.450	7.213 b	3.379	51.450	5.000 ab	.	51.450
	6	2000	59.661 b	44.380	49.745	7.169 b	3.072	49.745	5.000 ab	.	49.745
	4	1500	52.903 b	46.702	53.115	6.656 b	3.131	53.115	4.071 b	.	53.115
	3	1250	50.504 bc	40.791	47.835	6.536 b	2.987	47.835	3.786 bc	.	47.835
	2	1000	36.086 cd	28.596	28.275	5.552 c	2.491	28.275	2.571 cd	.	28.275
	1	750	30.903 d	30.509	19.575	4.977 c	2.672	19.575	1.643 d	.	19.575
LSD P=.05				15.9779			0.9087				1.2195
Standard Deviation				21.2340			1.2076				.
CV				39.5			18.18				.
Grand Mean				53.7579			6.6424				.
Levene's F				1.443			0.468				2.922
Levene's Prob(F)				0.207			0.831				0.012*
Friedman's X2				.			.				40.102
P(Friedman's X2)				.			.				0.0
Skewness				1.3534*			0.3459				-0.1203
Kurtosis				2.4478*			-0.5214				3.8368
Replicate F				26.801			40.753				
Replicate Prob(F)				0.0001			0.0001				
Treatment F				9.690			12.230				
Treatment Prob(F)				0.0001			0.0001				

Rating Data Type  
 CV = coefficient of variation  
Rating Unit  
 DOLLAR = dollar  
ARM Action Codes  
 AS = Automatic square root transformation of X+0.5

Means followed by same letter or symbol do not significantly differ (P=.05, LSD).  
 Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.  
 Reported values for columns 3 are rank means and not assessment means