

Stat 296 Fall 2007
The Mann-Whitney Test and the Wilcoxon Rank-Sum Test

```
data measurements;
input TreatmentGroup ObservedData;
datalines;
1 15.3
1 15.94
1 16.01
1 16.43
1 16.55
2 15.88
2 15.91
2 15.98
2 16.05
2 16.10
;
run;

proc npar1way data=measurements wilcoxon correct=no;
class TreatmentGroup;
exact wilcoxon;
var ObservedData;
run;
```

The SAS System 10:52 Tuesday, October 2, 2007 1

The NPAR1WAY Procedure

Wilcoxon Scores (Rank Sums) for Variable ObservedData
Classified by Variable TreatmentGroup

Treatment Group	N	Sum of Scores	Expected Under H0	Std Dev Under H0	Mean Score
1	5	30.0	27.50	4.787136	6.0
2	5	25.0	27.50	4.787136	5.0

The NPAR1WAY Procedure

Wilcoxon Two-Sample Test

Statistic (S)	30.0000
Normal Approximation	
Z	0.5222
One-Sided Pr > Z	0.3008
Two-Sided Pr > Z	0.6015
t Approximation	
One-Sided Pr > Z	0.3071
Two-Sided Pr > Z	0.6141
Exact Test	
One-Sided Pr >= S	0.3452
Two-Sided Pr >= S - Mean	0.6905

The NPAR1WAY Procedure

Kruskal-Wallis Test

Chi-Square	0.2727
DF	1
Pr > Chi-Square	0.6015