The rm4 data

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The data:

```
a 10 10 14 13
a 11 9 12 14
a 10 11 13 13
b 15 15 11 10
b 14 14 10 12
b 13 15 10 11
```

The SAS code and output:

```
options linesize=75;

data rm;
  infile "rm4.dat";
  input trt $ y1 y2 y3 y4;

proc glm;
  class trt;
  model y1 y2 y3 y4 = trt / nouni;
  repeated time;
```

```
The GLM Procedure
   Class Level Information
Class         Levels    Values
trt                2    a b

Number of Observations Read           6
Number of Observations Used           6

The GLM Procedure
Repeated Measures Analysis of Variance
           Repeated Measures Level Information
Dependent Variable          y1       y2       y3       y4
```

Level of time 1 2 3 4

MANOVA Test Criteria and Exact F Statistics
for the Hypothesis of no time Effect
H = Type III SSCP Matrix for time
E = Error SSCP Matrix
S=1 M=0.5 N=0

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.44926108	0.82	3	2	0.5913
Pillai's Trace	0.55073892	0.82	3	2	0.5913
Hotelling-Lawley Trace	1.22587719	0.82	3	2	0.5913
Roy's Greatest Root	1.22587719	0.82	3	2	0.5913

MANOVA Test Criteria and Exact F Statistics
for the Hypothesis of no time*trt Effect
H = Type III SSCP Matrix for time*trt
E = Error SSCP Matrix
S=1 M=0.5 N=0

Statistic	Value	F Value	Num DF	Den DF	Pr > F
Wilks' Lambda	0.01797044	36.43	3	2	0.0268
Pillai's Trace	0.98202956	36.43	3	2	0.0268
Hotelling-Lawley Trace	54.64692982	36.43	3	2	0.0268
Roy's Greatest Root	54.64692982	36.43	3	2	0.0268

The GLM Procedure
Repeated Measures Analysis of Variance
Tests of Hypotheses for Between Subjects Effects

Source	DF	Type III SS	Mean Square	F Value	Pr > F
trt	1	4.16666667	4.16666667	25.00	0.0075
Error	4	0.66666667	0.16666667		

The GLM Procedure
Repeated Measures Analysis of Variance
Univariate Tests of Hypotheses for Within Subject Effects

Source	DF	Type III SS	Mean Square	F Value	Pr > F
time	3	1.50000000	0.50000000	0.60	0.6272
time*trt	3	67.50000000	22.50000000	27.00	<.0001
Error(time)	12	10.00000000	0.83333333		

Source	Adj Pr > F G - G	H-F-L
time	0.5833	0.6272
time*trt	0.0002	<.0001
Error(time)		

Greenhouse-Geisser Epsilon	0.7264
Huynh-Feldt-Lecoutre Epsilon	1.6285