The A by S Analysis of Variance

One can apply repeated measures to subjects in two or more separate groups. For example, we may be interested in the differences between males and females sampled from a school that have been administered a standardized achievement test. We will use the ABRDATA.LAZ file to demonstrate this analysis. Notice the variables we have selected and the options chosen:
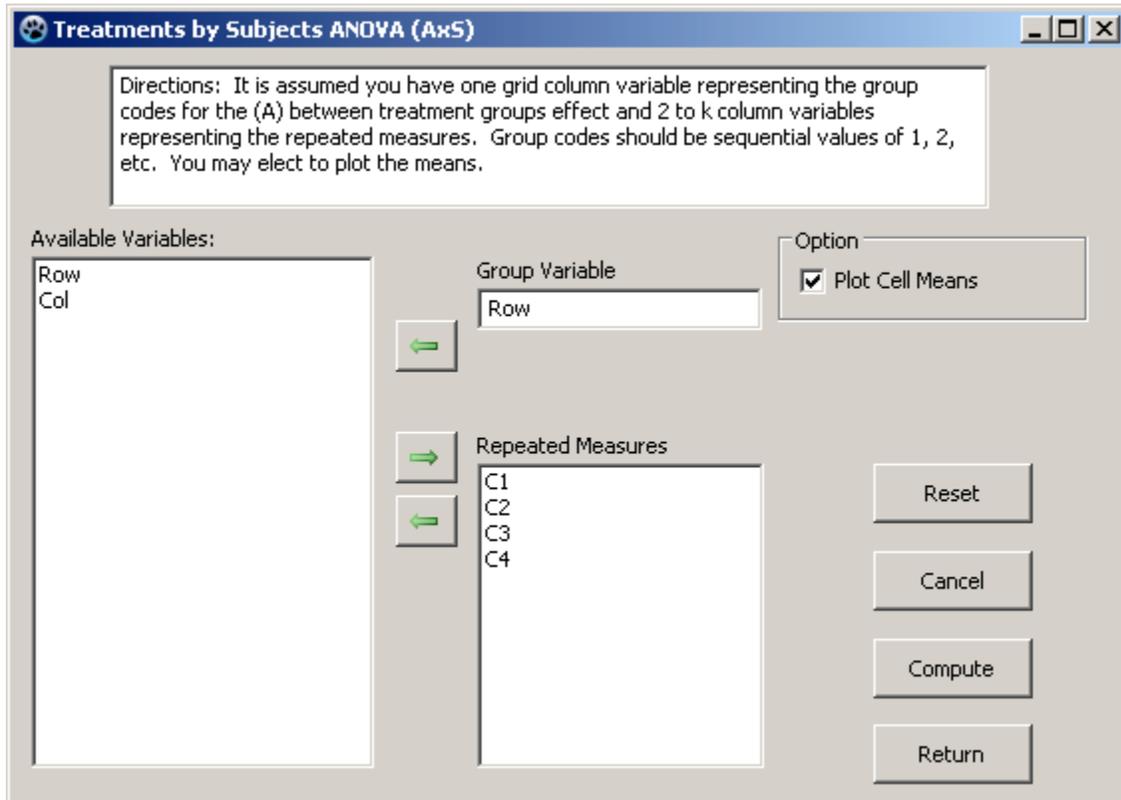
When we click the Compute button, the following results are observed:

ANOVA With One Between Subjects and One Within Subjects Treatments

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Source            df    SS        MS        F         Prob.
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Between           11    181.000
   Groups (A)      1     10.083    10.083    0.590     0.4602
   Subjects w.g.  10    170.917    17.092

Within Subjects   36   1077.000
   B Treatments    3    991.500   330.500   128.627    0.0000
   A X B inter.    3      8.417     2.806     1.092    0.3677
   B X S w.g.     30     77.083     2.569

TOTAL             47   1258.000
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Means

TRT. B 1 B 2 B 3 B 4 TOTAL
A
 1 16.167 11.000 7.833 3.167 9.542
 2 16.833 12.000 7.667 5.333 10.458
TOTAL 16.500 11.500 7.750 4.250 10.000

Standard Deviations
TRT. B 1 B 2 B 3 B 4 TOTAL
A
 1   2.714 2.098 2.714 1.835 5.316
 2   1.329 2.828 2.338 3.445 5.099
TOTAL 2.067 2.431 2.417 2.864 5.174