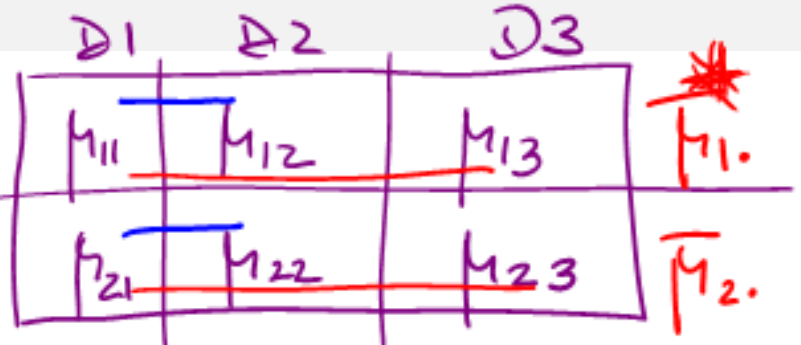
Testing for Non-Zero Effects

D1 - D2 difference Should be the same for both Diet 1 & Diet 2



Compare D1 vs D3 across both diets

H_0: No Diet-by-Drug Interactions:

$(\mu_{ij} - \mu_{ij'} - \mu_{i'j} + \mu_{i'j'} = 0$ for all $i \neq i'$ and $j \neq j')$

$\mu_{11} - \mu_{12}$ $\quad -(\mu_{21} + \mu_{22})$

$$\begin{bmatrix} 1 & -1 & 0 & -1 & 1 & 0 \\ 1 & 0 & -1 & -1 & 0 & 1 \end{bmatrix} \begin{bmatrix} \mu_{11} \\ \mu_{12} \\ \mu_{13} \\ \mu_{21} \\ \mu_{22} \\ \mu_{23} \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \end{bmatrix}$$

$\mu_{11} - \mu_{13} - \mu_{21} + \mu_{23}$

R/SAS Code and Output

- The R/SAS code and output for the above sample are given as separate handouts.
- We will discuss alternative parameterizations of the cell-means model as part of the implementation in SAS and R

