TWO-WAY ANOVA. PART IV

FACTOR A	FACTOR B: T1	T2	T3	Row Totals	Factor A Means
C1	25 $= x_{111}$ 22 $= x_{112}$ 47 $\bar{x}_{11} = 23.5$	28 $= x_{121}$ 26 $= x_{122}$ 54 $\bar{x}_{12} = 27$	27 24 51 $\bar{x}_{13} = 25.5$	152	$\bar{x}_{1\cdot}$ 25.33
C2	23 21 44 $\bar{x}_{21} = 22$	22 24 46 $\bar{x}_{22} = 23$	29 28 57 $\bar{x}_{23} = 28.5$	147	$\bar{x}_{2\cdot}$ 24.5
Column Totals	91	100	108	299	
Factor B Means	$\bar{x}_{\cdot 1}$ 22.75	$\bar{x}_{\cdot 2} = 25$	$\bar{x}_{\cdot 3} = 27$		$\bar{\bar{x}}$ 24.92

$$SStot = \sum_{i=1}^{a}\sum_{j=1}^{b}\sum_{k=1}^{r}(x_{ijk} - \bar{\bar{x}})^2$$

$$= (25-24.92)^2 + (22-24.92)^2 + \cdots + (28-24.92)^2 = 78.92$$

$$SSA = b \cdot r \sum_{i=1}^{a}(\bar{x}_{i\cdot} - \bar{\bar{x}})^2$$

$$= 3.2\left[(25.33-24.92)^2 + (24.5-24.92)^2\right] = 2.08$$

$$SSB = a \cdot r \sum_{j=1}^{b}(\bar{x}_{\cdot j} - \bar{\bar{x}})^2$$

$$= 2.2\left[(22.75-24.92)^2 + (25-24.92)^2 + (27-24.92)^2\right]$$

$$= 36.16$$