ROWS

[19.2] $$\frac{1}{nC}\sum^{R} T^2_{r..} - \frac{T^2}{nRC}$$

S/R

[19.3] $$\frac{1}{C}\sum^{R}\sum^{n} T^2_{r.s} - \frac{1}{nC}\sum^{R} T^2_{r..}$$

WITHIN SUBJECTS

[19.4] $$\sum^{R}\sum^{C}\sum^{n} X^2_{rci} - \frac{1}{C}\sum^{R}\sum^{n} T^2_{r.s}$$

COLUMNS

[19.5] $$\frac{1}{nR}\sum^{C} T^2_{.c.} - \frac{T^2}{nRC}$$

$R \times C$

[19.6] $$\frac{1}{n}\sum^{R}\sum^{C} T^2_{rc.} - \frac{1}{nC}\sum^{R} T^2_{r..} - \frac{1}{nR}\sum^{C} T^2_{.c.} + \frac{T^2}{nRC}$$

SC/R

[19.7] $$\sum^{R}\sum^{C}\sum^{n} X^2_{rci} - \frac{1}{C}\sum^{R}\sum^{n} T^2_{r.s} - \frac{1}{n}\sum^{R}\sum^{C} T^2_{rc.} + \frac{1}{nC}\sum^{R} T^2_{r..}$$

TOTAL

[19.8] $$\sum^{R}\sum^{C}\sum^{n} X^2_{rci} - \frac{T^2}{nRC}$$

In practical computation a number of these terms can be obtained by simple subtraction.

19.9 ILLUSTRATIVE EXAMPLE OF A TWO-FACTOR EXPERIMENT WITH REPEATED MEASUREMENTS ON ONE FACTOR

Table 19.5 shows illustrative data for a two-factor experiment with repeated measurements on one factor. Two groups of four subjects were used. Each subject was measured under five experimental conditions. The totals required for computational purposes are also shown in this table.