

**A: Gender, B: Domain, C: Department, D: Division.**

**Effect: fixed, fixed, random, random (recommended).**

SOURCE	EMS	STATISTIC
A	$\sigma^2 + 3\sigma_{abcd}^2 + 18\sigma_{abc}^2 + 162\theta_a^2$	$\frac{MS_A}{MS_{AC(B)}}$
B	$\sigma^2 + 3\sigma_{abcd}^2 + 18\sigma_{abc}^2 + 6\sigma_{bcd}^2 + 36\sigma_{bc}^2 + 108\theta_b^2$	$\frac{MS_B}{MS_{C(B)}}$
AB	$\sigma^2 + 3\sigma_{abcd}^2 + 18\sigma_{abc}^2 + 54\theta_{ab}^2$	$\frac{MS_{AB}}{MS_{AC(B)}}$
C(B)	$\sigma^2 + 3\sigma_{abcd}^2 + 18\sigma_{abc}^2 + 6\sigma_{bcd}^2 + 36\sigma_{bc}^2$	$\frac{MS_{C(B)} + MS_{AD(C)}}{MS_{AC(B)} + MS_{D(C)}}$
AC(B)	$\sigma^2 + 3\sigma_{abcd}^2 + 18\sigma_{abc}^2$	$\frac{MS_{AC(B)}}{MS_{AD(C)}}$
D(C)	$\sigma^2 + 3\sigma_{abcd}^2 + 6\sigma_{bcd}^2$	$\frac{MS_{D(C)}}{MS_{AD(C)}}$
AD(C)	$\sigma^2 + 3\sigma_{abcd}^2$	$\frac{MS_{AD(C)}}{MS_E}$
Residual	$\sigma^2$	

**Effect: fixed, fixed, fixed, random.**

SOURCE	EMS	STATISTIC
A	$\sigma^2 + 3\sigma_{abcd}^2 + 162\theta_a^2$	$\frac{MS_A}{MS_{AD(C)}}$
B	$\sigma^2 + 3\sigma_{abcd}^2 + 6\sigma_{bcd}^2 + 108\theta_b^2$	$\frac{MS_B}{MS_{D(C)}}$
AB	$\sigma^2 + 3\sigma_{abcd}^2 + 54\theta_{ab}^2$	$\frac{MS_{AB}}{MS_{AD(C)}}$
C(B)	$\sigma^2 + 3\sigma_{abcd}^2 + 6\sigma_{bcd}^2 + 36\theta_{bc}^2$	$\frac{MS_{C(B)}}{MS_{D(C)}}$
AC(B)	$\sigma^2 + 3\sigma_{abcd}^2 + 18\theta_{abc}^2$	$\frac{MS_{AC(B)}}{MS_{AD(C)}}$
D(C)	$\sigma^2 + 3\sigma_{abcd}^2 + 6\sigma_{bcd}^2$	$\frac{MS_{D(C)}}{MS_{AD(C)}}$
AD(C)	$\sigma^2 + 3\sigma_{abcd}^2$	$\frac{MS_{AD(C)}}{MS_E}$
Residual	$\sigma^2$	