

TABLE 4.24

Expected Mean Squares Table, Step 1

Term	x_1	x_2	x_1x_2	x_3	x_1x_3	x_2x_3	$x_1x_2x_3$	$r : x_1x_2x_3$
x_1								
x_2								
x_1x_2								
x_3								
x_1x_3								
x_2x_3								
$x_1x_2x_3$								
$r : x_1x_2x_3$								

TABLE 4.25

Expected Mean Squares Table, Step 2

Term	x_1	x_2	x_1x_2	x_3	x_1x_3	x_2x_3	$x_1x_2x_3$	$r : x_1x_2x_3$
x_1	*		*		*		*	*
x_2		*	*			*	*	*
x_1x_2			*				*	*
x_3				*	*	*	*	*
x_1x_3					*		*	*
x_2x_3						*	*	*
$x_1x_2x_3$							*	*
$r : x_1x_2x_3$								*

TABLE 4.26
 Expected Mean Squares Table, Step 6

Term	Term						
	x_1	x_2	x_1x_2	x_3	x_1x_3	x_2x_3	$x_1x_2x_3$
	EMS						
	$\frac{n_r n_2 n_3 \text{SS} x_1}{n_1 - 1}$	$\frac{n_r n_1 n_3 \text{SS} x_2}{n_2 - 1}$	$\frac{n_r n_3 \text{SS} (x_1 x_2)}{(n_1 - 1)(n_2 - 1)}$	$\frac{n_r n_1 n_2 \text{SS} x_3}{n_3 - 1}$	$\frac{n_r n_2 \text{SS} (x_1 x_3)}{(n_1 - 1)(n_3 - 1)}$	$\frac{n_r n_1 \text{SS} (x_2 x_3)}{(n_2 - 1)(n_3 - 1)}$	$\frac{n_r \text{SS} (x_1 x_2 x_3)}{(n_1 - 1)(n_2 - 1)(n_3 - 1)}$
x_1	*		*		*		*
x_2		*	*			*	*
x_1x_2			*				*
x_3				*	*	*	*
x_1x_3					*		*
x_2x_3						*	*
$x_1x_2x_3$							*
$r : x_1x_2x_3$							*

TABLE 4.30
 Expected Mean Squares for Split Plot, Step 6

Term	Term							
	K	x_1	Kx_1	x_2	Kx_2	x_1x_2	Kx_1x_2	$r:Kx_1x_2$
	EMS							
	$n_1n_2\sigma_K^2$	$\frac{n_rn_2SSx_1}{n_1-1}$	$n_2\sigma_{K1}^2$	$\frac{n_rn_1SSx_2}{n_2-1}$	$n_1\sigma_{K2}^2$	$\frac{n_rSS(x_1x_2)}{(n_1-1)(n_2-1)}$	σ_{K12}^2	σ_r^2
x_1	*		*		*		*	*
x_2		*	*			*	*	*
x_1x_2			*				*	*
x_3				*	*	*	*	*
x_1x_3					*		*	*
x_2x_3						*	*	*
$x_1x_2x_3$							*	*
$r:x_1x_2x_3$								*

TABLE 4.31
 Expected Mean Squares for Split Plot, Step 7

Term	Term							
	K	x_1	Kx_1	x_2	Kx_2	x_1x_2	Kx_1x_2	$r:Kx_1x_2$
	EMS							
	$n_1n_2\sigma_K^2$	$\frac{n_rn_2SSx_1}{n_1-1}$	$n_2\sigma_{K1}^2$	$\frac{n_rn_1SSx_2}{n_2-1}$	$n_1\sigma_{K2}^2$	$\frac{n_rSS(x_1x_2)}{(n_1-1)(n_2-1)}$	σ_{K12}^2	σ_r^2
x_1	*							*
x_2		*	*					*
x_1x_2			*					*
x_3				*	*			*
x_1x_3					*			*
x_2x_3						*	*	*
$x_1x_2x_3$							*	*
$r:x_1x_2x_3$								*