

Total sum of squared scores	$\Sigma X_T^2$	The sum of all scores individually squared in a study
<b>STAGE 2</b>		
[1]	$\frac{(\Sigma X_T)^2}{N}$	The correction factor
[2]	$\Sigma \frac{X^2}{n}$	The “uncorrected” variation between groups
[3]	$\Sigma X_T^2$	The “uncorrected” total variation in a study
<b>STAGE 3</b>		
Sum of squares between groups	$SS_{BG} = [2] - [1]$	The sum of squared deviations between groups
Sum of squares total	$SS_T = [3] - [1]$	The sum of squared deviations in all groups
Sum of squares error	$SS_E = SS_T - SS_{BG}$	The sum of squared deviations within groups (error)
<b>STAGE 4</b>		
Mean square between groups	$MS_{BG} = \frac{SS_{BG}}{df_{BG}}$	The variance between groups. This is the numerator of the test statistic.
Mean square error	$MS_E = \frac{SS_E}{df_E}$	The variance within groups (error). This is the denominator of the <i>F</i> statistic.
<i>F</i> statistic formula	$F_{obt} = \frac{MS_{BG}}{MS_E}$	The obtained value of the test statistic for an ANOVA
<b>Step 4: Make a decision.</b>		
Decision criterion	–	When $F_{obt} < F_{crit}$ , retain the null hypothesis. When $F_{obt} \geq F_{crit}$ , reject the null hypothesis.