

FORMULA SHEET FOR ONE-WAY ANOVA

I. DEGREES OF FREEDOM

- Degrees of freedom total $df_T = n_T - 1$
- Degrees of freedom between $df_b = K - 1$
- Degrees of freedom within $df_w = df_T - df_b$

II. SUM OF SQUARES

- Sum of Squares total $SS_T = \sum x_T^2 - \frac{(\sum x_T)^2}{n_T}$
- Sum of Squares between $SS_b = \frac{(\sum x_1)^2}{n_1} + \frac{(\sum x_2)^2}{n_2} + \dots - \frac{(\sum x_T)^2}{n_T}$
- Sum of Squares within $SS_w = SS_T - SS_b$

III. MEAN SQUARES

- Mean square between $MS_b = \frac{SS_b}{df_b}$
- Mean square within $MS_w = \frac{SS_w}{df_w}$

IV. OBTAINED F

- F-obtained $f = \frac{MS_b}{MS_w}$

V. EFFECT SIZE

- Eta-squared $\eta^2 = \frac{SS_b}{SS_T}$

VI. GENERAL

- $f = t^2$