$$H_0 : \mu_1 = \mu_2 = \mu_G$$

Engineers   Administrators

Y

$\bar{Y}_{.1}$ $\bar{Y}_{.2}$

E   A

Total

Between part reflects the differences between the attitudes of engineers and administrators toward the new health plan

Within part reflects the differences that exist among the 50 engineers and the 50 administrators toward the new health plan

Between Group:

$$SSB = \sum_{j=1}^{2} n_j \left(\bar{Y}_j - \bar{Y}_{..} \right)^2$$

Within Group:

$$SSW = \sum_{i=1}^{50} \sum_{j=1}^{2} \left(Y_{i,j} - \bar{Y}_{.j} \right)^2$$

$$F = \frac{SSB/(j-1)}{SSW/(N-j)}$$

, where j is the number of groups