

$$Z = \frac{\bar{x} - \mu_o}{\frac{\sigma_x}{\sqrt{n}}}, \quad Z = \frac{\bar{x} - \mu_o}{\frac{S_x}{\sqrt{n}}}, \quad t = \frac{\bar{x} - \mu_o}{\frac{S_x}{\sqrt{n}}}, \quad K = \frac{\bar{x} - \mu_o}{\frac{\sigma_x}{\sqrt{n}}}, \quad K = \frac{\bar{x} - \mu_o}{\frac{S_x}{\sqrt{n}}}$$

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{S_p \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}, \quad S_p = \sqrt{\frac{(n_1 - 1) S_1^2 + (n_2 - 1) S_2^2}{n_1 + n_2 - 2}}$$

$$t' = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}, \quad d.f' = \frac{\left(\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}\right)^2}{\frac{(S_1^2)^2}{n_1} + \frac{(S_2^2)^2}{n_2}}$$

$$Z = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\frac{\delta_1^2}{n_1} + \frac{\delta_2^2}{n_2}}}, \quad t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}, \quad Z = \frac{(\bar{p}_1 - \bar{p}_2) - (P_1 - P_2)}{\sqrt{\frac{\bar{p}_1(1 - \bar{p}_1)}{n_1} + \frac{\bar{p}_2(1 - \bar{p}_2)}{n_2}}}$$

$$t = \frac{\bar{d} - 0}{\frac{S_d}{\sqrt{n}}}, \quad Z = \frac{\bar{p} - p_o}{\sqrt{\frac{p_o(1 - p_o)}{n}}}, \quad \chi^2 = \frac{(n-1) S_x^2}{\delta_o^2}, \quad F = \frac{S_1^2}{S_2^2}$$

$$\left\{ \begin{array}{l} SST = \sum_{i=1}^k \sum_{j=1}^n x_{ij}^2 - \frac{1}{N} \cdot T_{\infty}^2 \\ SS(Tr) = \sum_{i=1}^k \frac{T_{i\cdot}^2}{n_i} - \frac{1}{N} \cdot T_{\infty}^2 \\ SSE = SST - SS(Tr) \end{array} \right. \quad \left\{ \begin{array}{l} SST = \sum_{i=1}^k \sum_{j=1}^n x_{ij}^2 - \frac{1}{N} \cdot T_{\infty}^2 \\ SS(Tr) = \sum_{i=1}^k \frac{T_{i\cdot}^2}{n_i} - \frac{1}{N} \cdot T_{\infty}^2 \\ SS(B) = \sum_{i=1}^k \frac{T_{\cdot j}^2}{k} - \frac{1}{N} \cdot T_{\infty}^2 \\ SSE = SST - SS(Tr) - SSB \end{array} \right.$$

$$b = \frac{\sum xy - n\bar{x}\bar{y}}{\sum x^2 - n\bar{x}^2}, \quad a = \bar{y} - b\bar{x}, \quad y = a + bx, \quad S_e = \sqrt{\frac{\sum y^2 - a\sum y - b\sum xy}{n-2}}$$

$$S_b = \frac{S_e}{\sqrt{\sum x^2 - n\bar{x}^2}}, \quad P(b - t_{\frac{\alpha}{2}, n-2} \cdot S_b \leq \beta \leq b + t_{\frac{\alpha}{2}, n-2} \cdot S_b) = 1 - \alpha$$

$$S_a = S_e \sqrt{\frac{1}{n} + \frac{\bar{x}^2}{\sum x^2 - n\bar{x}^2}}, \quad P(a - t_{\frac{\alpha}{2}, n-2} \cdot S_a \leq \alpha \leq a + t_{\frac{\alpha}{2}, n-2} \cdot S_a) = 1 - \alpha$$

$$S_{y|x_o} = S_e \sqrt{\frac{1}{n} + \frac{(x - \bar{x})^2}{\sum x^2 - n\bar{x}^2}}, \quad t = \frac{b - \beta_o}{S_b}, \quad t = \frac{a - \alpha_o}{S_a}, \quad t = \frac{(a + bx_o) - (\alpha + \beta x_o)}{S_{y|x_o}}$$

$$r^2 = \frac{a\sum y + b\sum xy - n\bar{y}^2}{\sum y^2 - n\bar{y}^2}, \quad r = \frac{\sum xy - n\bar{x}\bar{y}}{\sqrt{\sum x^2 - n\bar{x}^2} \sqrt{\sum y^2 - n\bar{y}^2}}, \quad t = \frac{r - \rho_o}{\sqrt{(1-r^2)/(n-2)}}$$

$$Z_r = \frac{1}{2} \ln [(1+r)/(1-r)], \quad E(Z_r) = \frac{1}{2} \ln [(1+\rho_o)/(1-\rho_o)], \quad Z_r = \frac{Z_r - E(Z_r)}{1/\sqrt{n-3}}$$

$$\chi^2 = \sum \frac{(Fo_i - Fe_i)^2}{Fe_i}, \quad r_s = 1 - \frac{6 \sum d_i^2}{n(n^2 - 1)}, \quad Z = \frac{r_s - 0}{\sqrt{V(r_s)}}$$