n° di classi $= 1 + 3.3 \; \log_{10}(n)$

$$S = \Sigma(x-m)^2 \qquad s^2 = \frac{\sum (x-m)^2}{n-1} \qquad s = \sqrt{\frac{\sum (x-m)^2}{n-1}} \qquad s_m = \frac{s}{\sqrt{n}}$$

$$z = \frac{(x-m)}{s}$$

$$t_{indip} = \frac{m_a - m_b}{\sqrt{\frac{S_a + S_b}{n_a + n_b - 2} \cdot \frac{n_a + n_b}{n_a \cdot n_b}}} \qquad\qquad t_{app} = \frac{\text{media delle differenze}}{\text{errore standard della media delle differenze}}$$

$$LF = m \pm t \cdot s_m \qquad\qquad \text{sample size} \quad n = \frac{t^2 \cdot s^2}{0.05^2 \cdot m^2}$$

$$s_{totale}^2 = \frac{\sum\limits_{\text{per tutti i dati}} (x - m_{tot})^2}{n-1}$$

$$s_{tra\,gruppi}^2 = \frac{\sum\limits_{\text{per tutti i gruppi}} \left(n_{gruppo} (m_{gruppo} - m_{tot})^2 \right)}{n \text{ dei gruppi} - 1}$$

$$s_{entro\,gruppi}^2 = \frac{\sum\limits_{\text{per tutti i gruppi}} \sum\limits_{\text{per tutti i dati del gruppo}} (x - m_{gruppo})^2}{\sum\limits_{\text{per tutti i gruppi}} \left(GDL_{gruppo} \right)}$$

$$F = \frac{s_{tra}^2}{s_{entro}^2}$$

$$q = \frac{m_a - m_b}{\sqrt{\frac{s_{entro}^2}{2} \cdot \left(\frac{1}{n_a} + \frac{1}{n_b} \right)}}$$

$$y = a + bx \qquad S_{x,y} = \sum (x - x_{medio})(y - y_{medio})$$

$$b = \frac{S_{x,y}}{S_x} \qquad\qquad s_b = \sqrt{\frac{s_{res}^2}{S_x}} \qquad\qquad t = \frac{b}{s_b}$$

$$a = y_{medio} - b\, x_{medio} \qquad\qquad s_a = \sqrt{s_{res}^2 \left(\frac{1}{n} + \frac{x_{medio}^2}{S_x} \right)} \qquad\qquad t = \frac{a}{s_a}$$

$$S_{tot} = \Sigma(y_{oss} - y_{medio})^2 \qquad\qquad GDL_{tot} = n-1$$

$$S_{reg} = \Sigma(y_{calc} - y_{medio})^2 \qquad\qquad GDL_{reg} = 1$$

$$S_{res} = \Sigma(y_{oss} - y_{calc})^2 \qquad\qquad GDL_{res} = n-2$$

$$s_y = \sqrt{s_{res}^2\left(\frac{1}{n} + \frac{(x - x_{medio})^2}{S_x}\right)}$$

$$LF = y \pm t\, s_y$$

$$t = \frac{b_a - b_b}{\sqrt{\dfrac{S_{res_a} + S_{res_b}}{n_a + n_b - 4}\left(\dfrac{1}{S_{x_a}} + \dfrac{1}{S_{x_b}}\right)}}$$

$$r = \frac{S_{x,y}}{\sqrt{S_x S_y}} \qquad\qquad s_r = \sqrt{\frac{1-r^2}{n-2}} \qquad\qquad t = \frac{r}{s_r}$$

$$c_c^2 = \Sigma\,\frac{(|\text{frequenza osservata} - \text{frequenza attesa}| - 0.5)^2}{\text{frequenza attesa}}$$

$$c_{c\text{-indip}}^2 = \frac{(|ad - bc| - n/2)^2\, n}{(a+b)(c+d)(a+c)(b+d)} \qquad\qquad c_{c-\text{appaiati - McNemar}}^2 = \frac{(|b-c|-1)^2}{b+c}$$

$$P_{n,i,p} = \frac{n!}{i!(n-i)!}\cdot p^i \cdot q^{n-i}$$

$$s_p = \sqrt{pq/n} \qquad\qquad LF = p \pm t \cdot s_p$$

$$P_{i,m} = \frac{m^i}{i!}\, e^{-m}$$

$$p(M+/T+) = \frac{p(M+)\cdot p(T+/M+)}{\left[p(M+)\cdot p(T+/M+)\right] + \left[p(M-)\cdot p(T+/M-)\right]}$$

$$\Sigma\,\text{ranghi} = \frac{n(n+1)}{2} \qquad\qquad \text{rango medio} = \frac{n+1}{2}$$

$$d_{a,b} = \sqrt{(v_{1_a} - v_{1_b})^2 + (v_{2_a} - v_{2_b})^2 + (v_{3_a} - v_{3_b})^2 + \dots + (v_{n_a} - v_{n_b})^2}$$