Formulas:

$$s = \sqrt{\frac{\sum_{for\ all\ x}(x-\bar{x})^2}{n-1}}$$

$$b_1 = \frac{\sum_{all\ x,y}(x-\bar{x})\cdot(y-\bar{y})}{\sum_{all\ x}(x-\bar{x})^2}$$

$$r = \frac{1}{n-1}\cdot\frac{\sum_{for\ all\ x,y}(x-\bar{x})\cdot(y-\bar{y})}{s_x s_y}$$

$$\sigma = \sqrt{\sum_{for\ all\ x}(x-\mu)^2}$$

$${}_nC_x = \frac{n!}{x!\,(n-x)!}$$

$$p_X =_n C_x p^x (1-p)^{n-x}$$

$$\left(\bar{x} - z_{\alpha/2}\cdot\frac{s}{\sqrt{n}}\,,\,\bar{x} + z_{\alpha/2}\cdot\frac{s}{\sqrt{n}}\right),\quad \left(\bar{x} - t_{\alpha/2}\,\frac{s}{\sqrt{n}}\right.$$

$$\left.\bar{x} + t_{\alpha/2}\,\frac{s}{\sqrt{n}}\right)$$

$$\left(\hat{p} - z_{\alpha/2}\cdot\sqrt{\frac{\hat{p}(1-\hat{p})}{n}}, \hat{p} + z_{\alpha/2}\cdot\sqrt{\frac{\hat{p}(1-\hat{p})}{n}}\right)$$

$$z = \frac{\hat{p_1} - \hat{p_2}}{\sqrt{\bar{p}(1-\bar{p})\left[\frac{1}{n_1}+\frac{1}{n_2}\right]}}$$

$$\bar{p} = \frac{X_1 + X_2}{n_1 + n_2}$$

$$n = \left(\frac{z_{\alpha/2}\sigma}{E}\right)^2$$