The **method of least squares** is widely used in practice to establish the **analytical dependencies** of functions according to its **experimental behavior**.

The **simplest** search for an **analytical expression** is carried out if the indicated dependence is close to **linear**.

Then the **analytical record** of the **function** is searched in the form

$$y = kx + b.$$

We introduce the notation :

$$\begin{cases} \underbrace{\left(\sum_{i=1}^{n} x_i^2\right)}_{a_{11}} k + \underbrace{\left(\sum_{i=1}^{n} x_i\right)}_{a_{12}} b = \underbrace{\sum_{i=1}^{n} x_i y_i}_{c_1} \\ \underbrace{\left(\sum_{i=1}^{n} x_i\right)}_{a_{21}} k + \underbrace{n}_{a_{22}} b = \underbrace{\sum_{i=1}^{n} y_i}_{c_2} \end{cases}$$