n.

, $a = (a_1, \ldots, a_n)$ $b = (b_1, \ldots, b_n)$?

1. $\sum_{i=1}^{n} (a_i - \bar{a}) = 0$
2. $\sum_{i=1}^{n} (a_i - \bar{a})^2 = \sum_{i=1}^{n} (a_i - \bar{a}) a_i$
3. $\sum_{i=1}^{n} (a_i - \bar{a})(b_i - \bar{b}) = \sum_{i=1}^{n} (a_i - \bar{a}) b_i$
4. $\sum_{i=1}^{n} (a_i - \bar{a})(b_i - \bar{b}) = \sum_{i=1}^{n} a_i b_i$