















$$\begin{cases} \forall i \leq n : x_i - a_i = -\lambda / 2; \\ \sum_{i \leq n+1} x_i = b. \end{cases} \quad (18)$$

Considering that  $a_{n+1} = 0$ , solution of system (18) is:

$$\lambda = 2 \left( \sum_{i \leq n} a_i - b \right) / n; \quad \forall i \leq n : x_i = a_i - 2\lambda. \quad (19)$$

It is obvious that systems (10) and (19) coincide. So, theorem 2 is proved.