$$24 a_n = 24 b_{n-1} + 24^2 a_{n-1}$$

$$b_n = 24 b_{n-1} + a_{n-1}$$

$$b_n = 24 a_n - 576 a_{n-1} + a_n$$

$$a_n = 24 a_{n-1} - 575 a_{n-12} + 24 a_{n-1}$$

$$a_n = 48 a_{n-1} - 575 a_{n-2}$$

zamiast stosować anihilatory użyjemy

$$q^n = a_n \qquad \text{mamy więc} \qquad q^n - 48 q^{n-1} + 575 q^{n-2} = 0 / : q^{n-2}$$

$$q^2 - 48 q + 575$$

$$\Delta = 48^2 - 4 \cdot 575 = 4 \quad \sqrt{\Delta} = 2$$

$$q_1 = \frac{48 - 2}{2} = 23 \qquad q_2 = \frac{48 + 2}{2} = 25$$

$$a_n = \alpha \, q_1^n + \beta \, q_2^n \quad \xleftarrow{} \text{dla słów } \emptyset \text{ elementowych lisze inne niż 'a'}$$

$$a_0 = 1 \qquad a_1 = 24 \xleftarrow{}$$

dla słów
0-elementowych
$\{\emptyset\}$

$$1 = \alpha + \beta \implies \beta = 1 - \alpha$$

$$24 = 23\alpha + 25\beta \qquad\qquad a_n = \frac{1}{2} \cdot 23 + \frac{1}{2} \cdot 25$$

$$24 = 23\alpha + 25 - 25\alpha$$

$$2\alpha = 1 / : 2$$

$$\alpha = \frac{1}{2} \qquad \beta = \frac{1}{2}$$