

$m=3$ A. kubiczna

x_i	y_i	x_i	y_i
0.00	0.486	0.55	1.102
0.05	0.866	0.60	1.099
0.10	0.944	0.65	1.017
0.15	1.144	0.70	1.111
0.20	1.103	0.75	1.117
0.25	1.202	0.80	1.152
0.30	1.166	0.85	1.265
0.35	1.191	0.90	1.380
0.40	1.124	0.95	1.575
0.45	1.095	1.00	1.857
0.50	1.122		

DANE

Rozwiązanie:

$La = b$ gdzie

$$L = \begin{bmatrix} 21 & 10.5 & 7.175 & 5.5125 \\ 10.5 & 7.175 & 5.5125 & 4.51666 \\ 7.175 & 5.5125 & 4.51666 & 3.85416 \\ 5.5125 & 4.51666 & 3.85416 & 3.38212 \end{bmatrix}$$

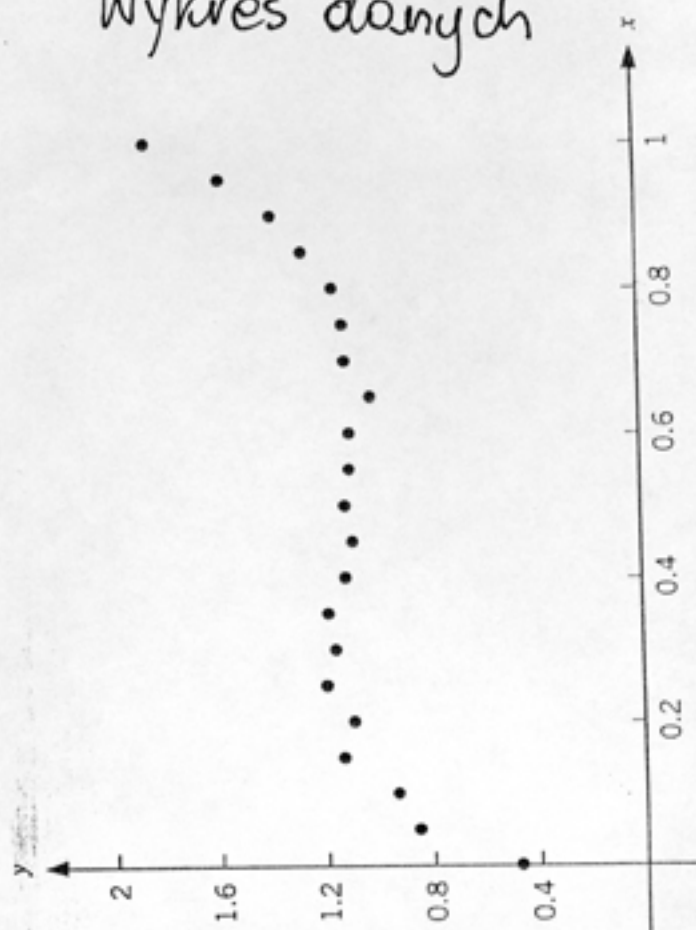
$$a = [a_1, a_2, a_3, a_4]^T$$

$$b = [24.1180, 13.2345, 9.46836, 7.55944]^T$$

\Downarrow

$$a = [0.5747, 4.7259, -11.1282, 7.6687]^T$$

Wykres danych



$$\text{cond}(L) = \|L\| \|L^{-1}\| \doteq 22000$$

duża !!!

Trudne rozwiązanie
(niestabilne)

Dodaj do "b"

$$[0.01, -0.01, 0.01, -0.01]^T$$

Rozwiązanie

$$a = [0.7408, 2.6825, -6.1538, 4.4550]^T$$

"Zupełnie inne"