



$$\begin{cases} x + y = 3 \\ x + 2y = 7 \\ 2x - y = 0.2 \\ 3x + y = 5 \end{cases}$$

$$A = \begin{pmatrix} 1 & 1 \\ 1 & 2 \\ 2 & -1 \\ 3 & 1 \end{pmatrix}$$

$$A^T A x = A^T b$$

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$$\rightarrow A^T A = \begin{pmatrix} 15 & 5 \\ 5 & 12 \end{pmatrix}, \quad A^T b = \begin{pmatrix} 25.4 \\ 28.8 \end{pmatrix}$$

$$\begin{cases} x = 1.04 \\ y = 1.97 \end{cases}$$

$$B = A^T A, \quad b_1 = A^T b$$

$$\left. \begin{array}{l} Bx = b_1 \rightarrow \text{kwadratu} \\ \text{symetryczna, poz. det.} \end{array} \right\} \text{ metoda}$$

$$x = B^{-1} b_1$$