$n \times n$ MATRIX A

$$\begin{bmatrix} a_{11} & \cdots & a_{1n} \\ \vdots & \ddots & \\ a_{n1} & & a_{nn} \end{bmatrix}$$

SUPPOSE $\sum_{j=1, j \neq i} |a_{ij}| < |a_{ii}|$ FOR $i = 1, \ldots, n$

FIND JACOBI ITERATION METHOD

JACOBI METHOD LIES UNDER THE CATEGORY OF WHAT ARE SOMETIMES CALLED STATIONARY ITERATIVE METHODS ...

IN WHICH, BARRANYA'S NOTE

= ITERATIVE METHODS:

$$x = Bx + C$$

$$x_{k+1} = B_k x + C$$

PROCESS TO

= JACOBI'S METHOD

MATRIX A

$A = L + D + U$

?

'MATRIX SPLITTING'

D : DIAG

(w/ COMPONENTS a_{ii} WHERE i IS COL INDEX)

A MATRIX A IS SAID TO BE STRICTLY 'DIAGONALLY DOMINANT' IF,

$$\sum_{j=1, j \neq i} |a_{ij}| < |a_{ii}| \quad \text{FOR } i = 1, \ldots, n$$

* THIS STRICT INEQUALITY IMPLIES $a_{ii} \neq 0$ DIA. ENTRY

SUPPOSE A IS STRICTLY DIA. DOMINANT