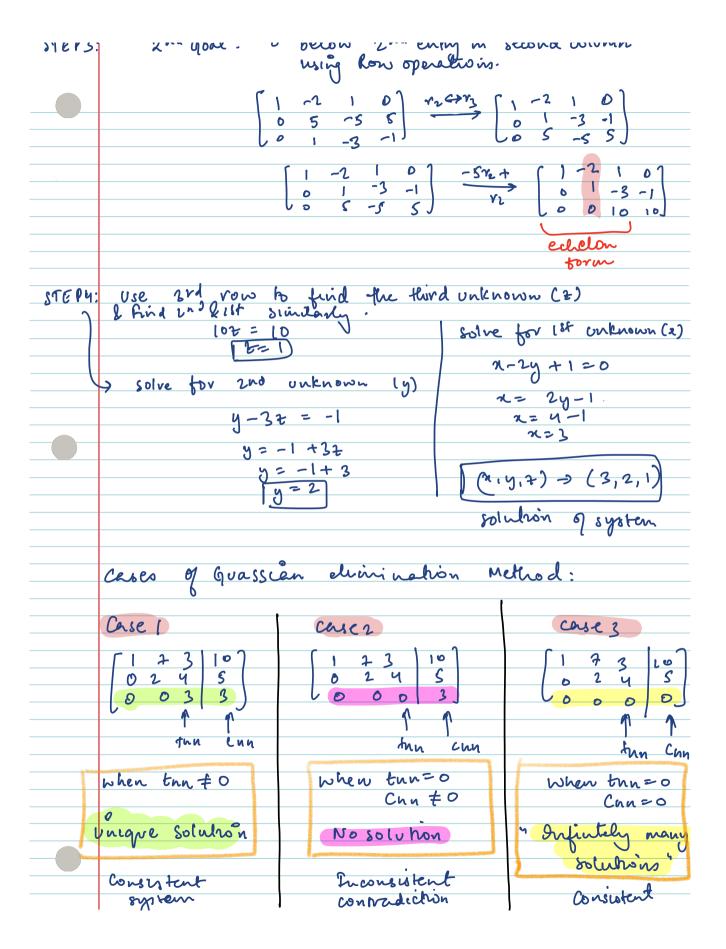
Linear	Ala	ebra

	Linear Algebra
	matrices: Reclangulon array vectors: both sife & direction of numbers in vectors vectors: both sife & direction vectors vectors vectors: both sife & direction vectors vectors: both sife & direction vectors: both site
	Uses: To solve linear equations linear transformations Eigen values & Eigen Vectors ICA Neural networks Linear Regression.
	unéan Equations: Represent straight line when plotted
	An+By = C 2n+3y = B y 25x - 1 n=4
	Guassian elimination: Used to solve system of uncan Equations
	Example: 2-24+2=0 Ax=b 22+24-32=5 4x-24+2=-1
STEP1:	Augmented Malvix $\rightarrow \begin{bmatrix} 1 & -2 & 1 & 0 \\ 2 & 2 & -3 & 5 \\ 4 & -7 & 1 & -1 \end{bmatrix}$
STEP 2:	15th Goal -> 0 below (st entry in 15th column using Row operations
	$ \begin{bmatrix} -1 & -2 & 1 & 0 \\ 2 & 1 & -3 & 5 \\ 4 & -1 & 1 & -1 \end{bmatrix} \xrightarrow{-2r_1+r_2} \begin{bmatrix} 1 & -2 & 1 & 0 \\ 0 & 5 & -5 & 5 \\ 0 & 1 & -3 & 1 \end{bmatrix} $
0.7.5.0.7	and and a halan and anher a description



REF and RREF RREF REF 0 0 ſJ 15 at reading places (pivoto) 0's below pivots pivot estumn each has only all non tero rows abone all revo rows example: example: [0 1 2 2] 0 0 1 3 0 "Billy suiplified" affer REF ni Cenear easier to interpret · Grassian elimination results donc to got values. · " Used to find Inverse shreve makin snie of marix it is not fully reduced. Inverse of Manices: Use elementary operation to Transform matrix with Reduced REF MARRET = full rank Enverse Chists Conditions for Inverse: 9 last row of AREFF Pullrank Savave are all zero then det | Marix) \$0 marik Linearly # is not fillrank nkn Freepenbont as - I doesn't ocem. If A is pull rank then A-1= E, Ery - - . E1 Sall elementanos

