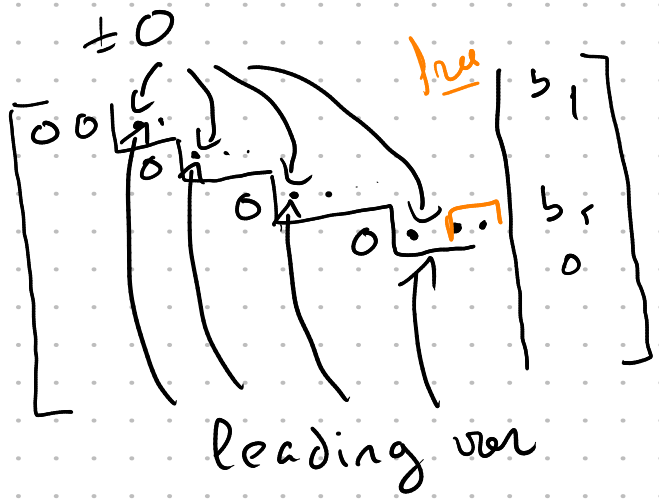

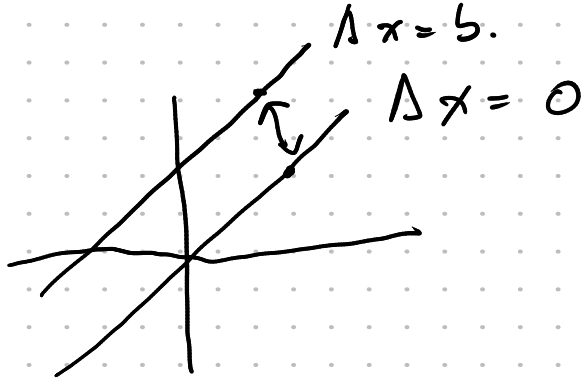

$x_{sol} \Rightarrow \underline{Ax = 0}$; x' is sol $\quad \underline{Ax' = b} \Rightarrow x'' = x + x'$

$Ax'' = Ax + Ax' = \underline{0} + b = b.$

- line passes thro 0 $\quad \underline{Ax = 0}$: $\begin{pmatrix} a & b \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix} = 0$

- $\{x : Ax = b\} \leftrightarrow \{x : Ax = 0\}$. $\quad \underline{Ax = b}$ $\quad ax + by = 0$