Lect 2. Example 2.6

Q. Controllable?

$A=\begin{bmatrix}1 & 0\\ 0 & 1\end{bmatrix}$ $B=\begin{bmatrix}1\\ 1\end{bmatrix}$

Solution: $W_c=[B\ AB]=\begin{bmatrix}1 & 1\\ 1 & 1\end{bmatrix}$

rank $W_c = 1 \neq n = 2$

So uncontrollable

$|W_c|=\begin{vmatrix}1 & 1\\ 1 & 1\end{vmatrix}=0$ det = 0 means not full rank