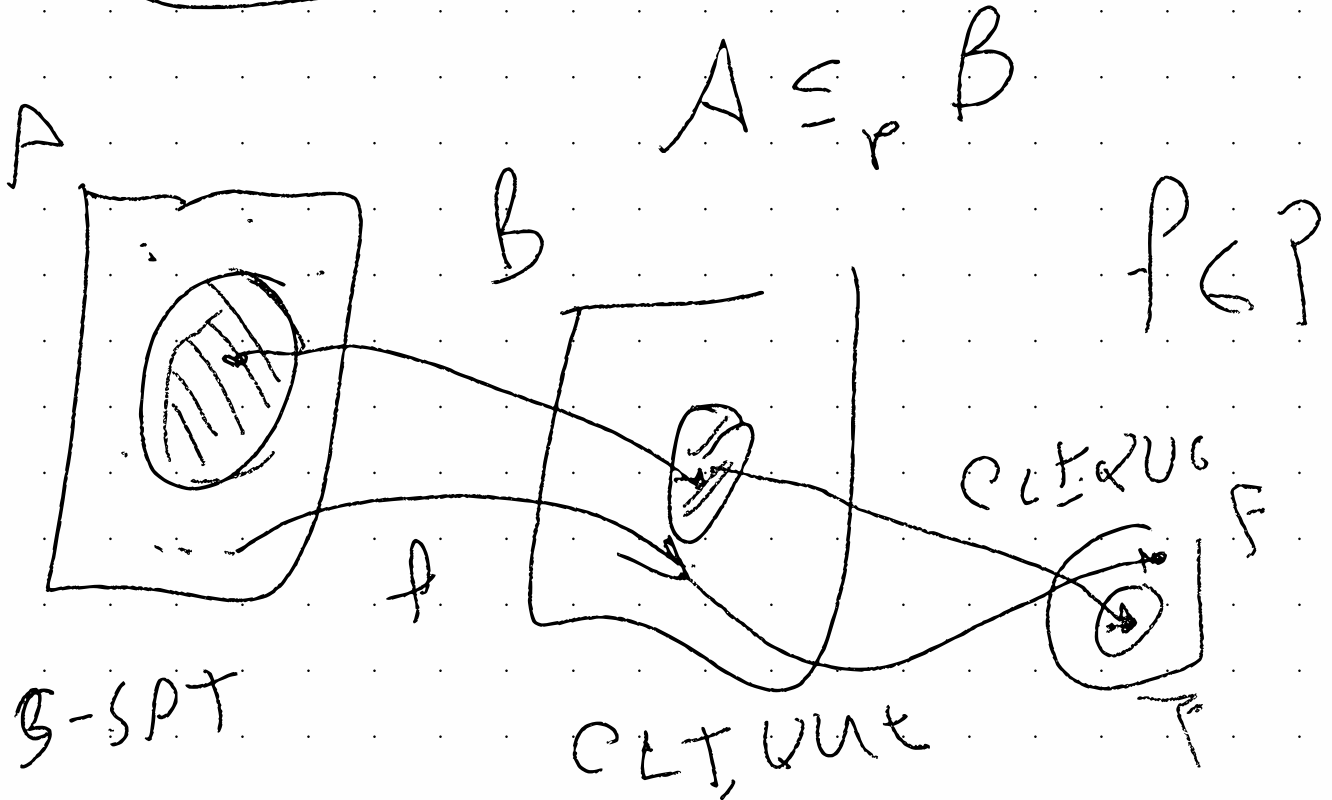


# Product topology



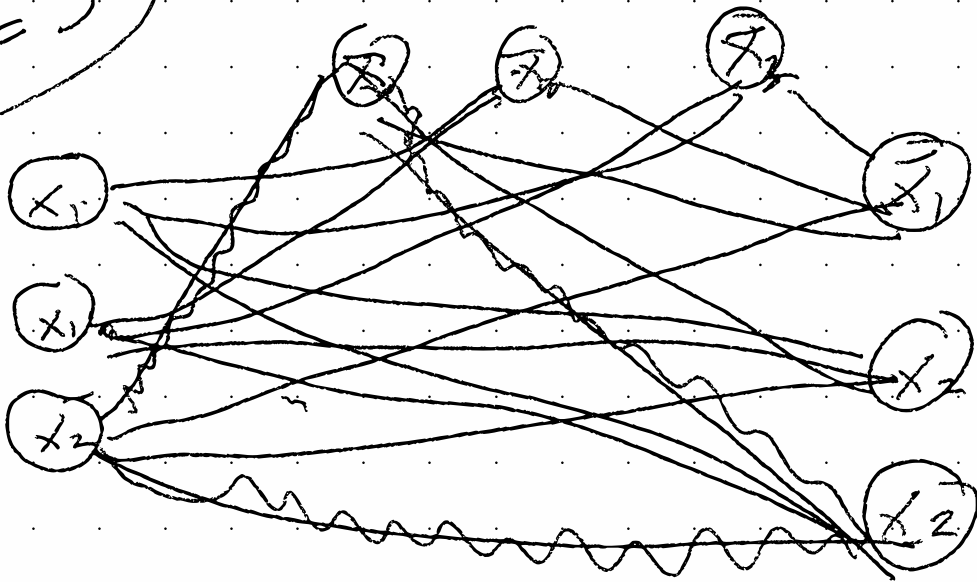
no. Is this reduction?  
Does it exist in NP? problem

Reducing 3SAT to CLIQUE

3SAT is Formula in Conjunctive  
Normal form, & each clause has  
! 3 variables

$$\phi = (x_1 \vee x_1 \vee x_2) \wedge (\bar{x}_1 \vee \bar{x}_2 \vee \bar{x}_2) \\ \wedge (\bar{x}_1 \vee x_2 \vee x_2)$$

$k=3$



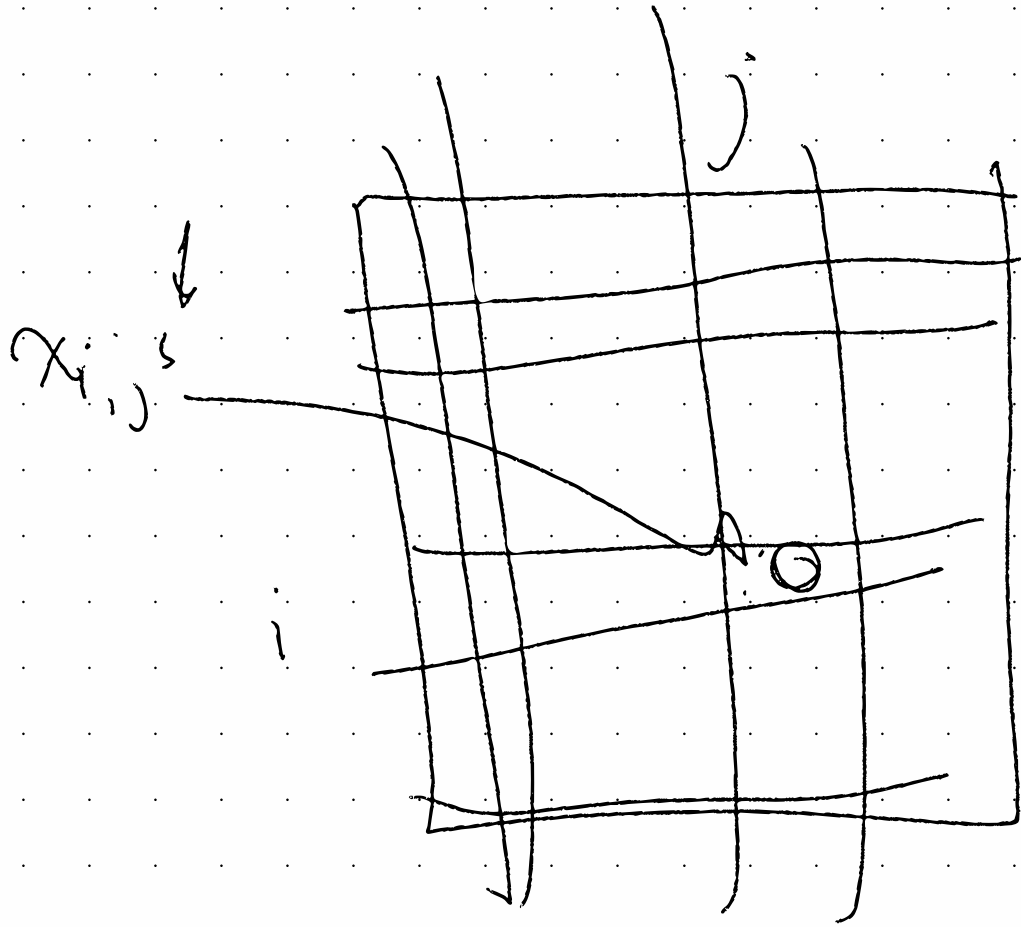
$x_2 = T$   
 $x_1 = F$

$n^2 \times n^k = n^{2k}$  + table size

variables of the SAT instance

$C = Q \cup T \cup \{#\}$  disjoint  $\cup$

$x_{i,j,s} \in \{T, F\}$  ;  $s \in C$   
;  $i, j \in [n^k]$



Combin JM

Combin of  $i^j$

T/A Anders JM ( $M_1 = 3M_2$ )

→

↑ has it

Ext out on the first