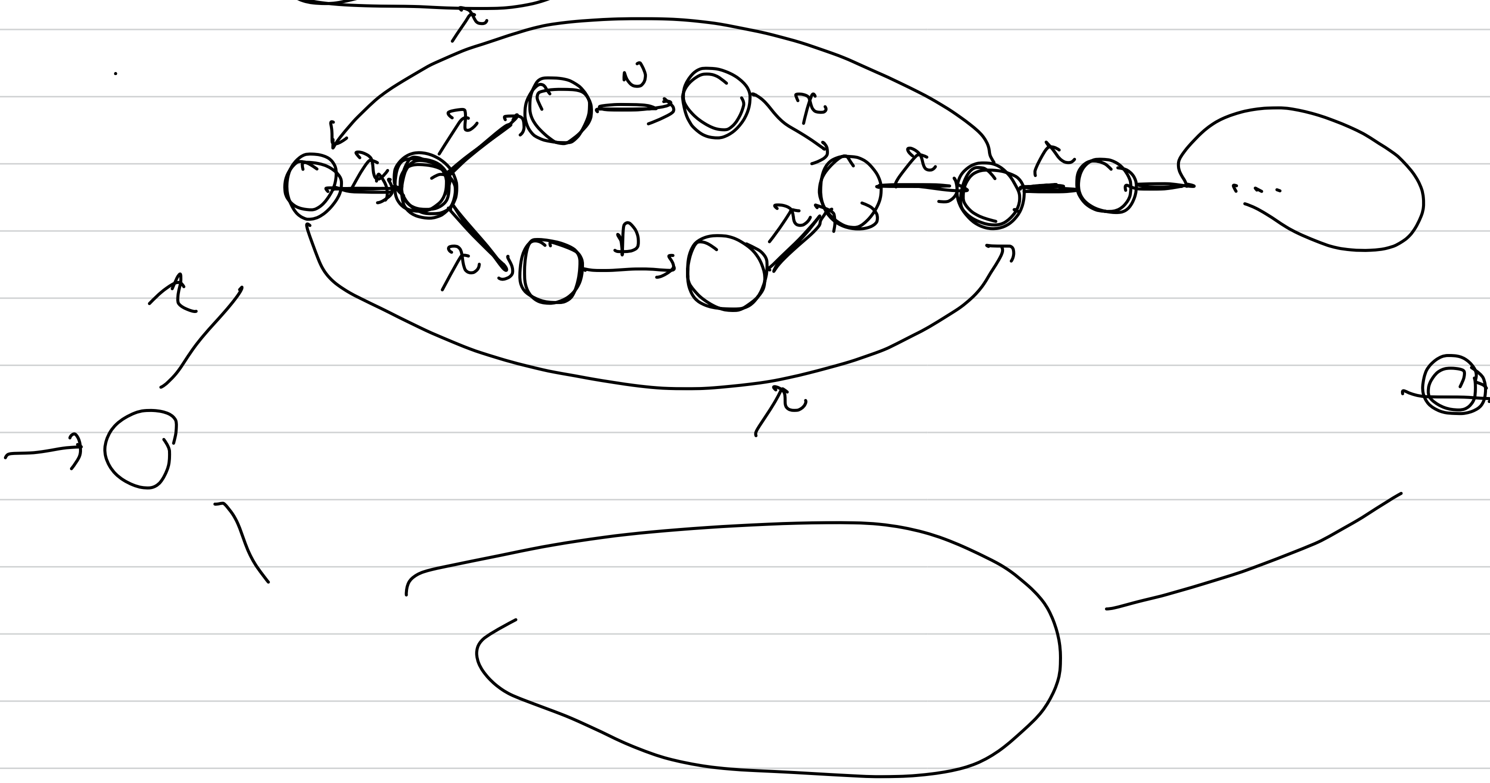
#.

상하좌우 lcm.

$r = ((U+D)^*(L+R)^*) + (L+R)^*(U+D)^*$



#

$J \to A \mid B \mid FB$

$M \to C \mid D \mid E \mid FE$

$K \to JM \mid JMJ \mid JDCJ \mid JDE \mid JDEJ \mid$

$S \to KS \mid \lambda$

#

Grammar: $G(\{S, A, B\}, \{a, b\}, S, P)$ $P: S \to Aa \mid a$, $A \to bB$

$B \to b$ 도

regular grammar

linear grammar

$S \to Aa \Rightarrow bBa \Rightarrow bba$

$\Rightarrow aa$

a.

L_1, L_2 regular 아니다

$L_1 \cup L_2$ 도 regular x

반례!

$L_1 : \{a^n b^n \mid n \geq 0\}$

$L_2 : \{a^n b^m \mid n \neq m\}$

$L_1 \cup L_2 = \{a^n b^m \mid n \geq 0, m \geq 0\}$

$= a^* b^*$

$G=(\{S\}, A\{\}, \{a,b\}, S, p)$ $\quad p: S \to aSbS \mid bSaS \mid \lambda$

ambiguous

abab