

$a^n b^n$

$aSbsb$

$bSasb$

$bSbSa$

$S \rightarrow aSb \mid AS \mid \epsilon$

$A \rightarrow aA \mid \epsilon$

$a^m b^n c^p d^q$

$m+n = p+q$

~~aM~~

$S \rightarrow aMCT \mid aMTd \mid$

$\phi \rightarrow McT \mid c$

$\mid MbCT \mid MbTd \mid \epsilon$

$M \rightarrow aM \mid Mb \mid \epsilon$

$T \rightarrow cT \mid Td \mid \epsilon$

$a\phi$ aRd
 ~~\neq~~ yd

$w \in \{a,b\}^*$ w has 2x b's as a's

$S \rightarrow SS \mid aSbSb \mid bSasb \mid bSbSa \mid \epsilon$

$\{uawb; u, w \in \{a,b\}^*, |u| = |w|\}$

$S \rightarrow MaMb \mid ab$

$M \rightarrow aM \mid bM$

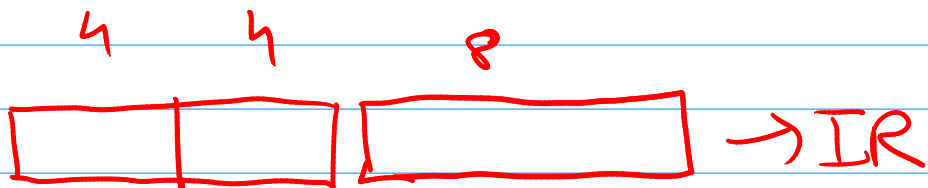
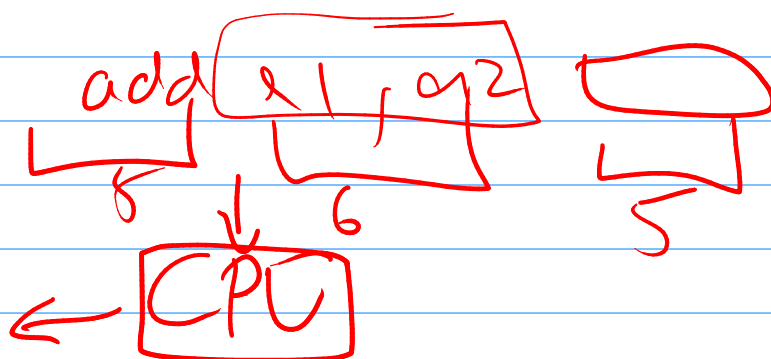
$S \rightarrow a S d$
 $S \rightarrow T$
 $S \rightarrow V$
 $S \rightarrow U$
 $S \rightarrow \epsilon$

$T \rightarrow a T c$
 $T \rightarrow V$
 $T \rightarrow \epsilon$

$U \rightarrow b u d$
 $U \rightarrow V$
 $U \rightarrow \epsilon$
 $V \rightarrow b v c$
 $V \rightarrow \epsilon$

$a a b$ $d d b b b b a$

$SS | a S b S b | b S e S b | b S b S a | \epsilon$



m2m 0xFE

