

-- 13.1.18

>> a
S -> 0
S -> 0A
A -> 11A
A -> 11

>> b
S -> lamda
S -> 0A11
A -> lamda
A -> 0A11

>> c
S -> lamda
S -> 0A0
A -> lamda
A -> 0A0
A -> B
B -> lamda
B -> 1B

-- 13.4.6

>> a
 $\text{lamda} \cup (0 \cup 1) \cup (0 \cup 1)(0 \cup 1)$

>> b
 $00(1^*)0$

>> c
 $(0 \cup 100)^*$

>> d
 $((0 \cup 10)^* \cup 1)00$

>> e
 $1^*(01^*01^*)^*$

-- 13.4.16

$G = (V, T, S, P)$

where:

$V = \{0, 1, A, B, S\}$ where $S = s_0$, $A = s_2$ and $B = s_1$

$T = \{0, 1\}$

$S =$ starting symbol

$P = \{$

$S \rightarrow 1A,$
 $S \rightarrow 0B,$
 $S \rightarrow 0,$
 $S \rightarrow \text{lamda},$
 $A \rightarrow 0A,$
 $A \rightarrow 1B,$
 $A \rightarrow 1,$
 $B \rightarrow 0A,$
 $B \rightarrow 1B,$
 $B \rightarrow 1$

$\}$