03.12.2023 Samostatná práce 6

Př 6.1 $L = \{a^n b^m a^n \mid m, n \geq 0\}$

$S \to aSa \mid B$

$B \to bB \mid \varepsilon$ ✓

1) Každé slovo $a^n b^m a^n$ vygeneruju

$S \xrightarrow{S \to aSa\ (n)}{}^{*} a^n S a^n \xrightarrow{S \to B} a^n B a^n \xrightarrow{B \to bB\ (m)}{}^{*} a^n b^m B a^n \xrightarrow{B \to \varepsilon} a^n b^m a^n$ ✓

2) Nevygenerujeme nic navíc

$S \Rightarrow^{*} u \quad m, n \geq 0$?

$S \Rightarrow^{*} a^n B a^n \quad n \geq 0$

$B \Rightarrow^{*} b^m \quad m \geq 0$

Tedy $S \Rightarrow^{*} u$ pro $u = a^n b^m a^n$ $m, n \geq 0$

u je slovo, co je u, u jak?

jak negenerujete nic navíc?

Př 6.2

G: $S \to aA \mid bB \mid aSa \mid bSb \mid \varepsilon$

$A \to bCD \mid DBa$

$B \to Bb \mid AC$

$C \to aA \mid a$

$D \to DE$

$E \to e$

a) $V_1 = \{X \mid X \to w \in P,\ w \in \Sigma^*\} = \{S, E, C\}$ proč ?

$V_2 = \{X \mid X \to \alpha \quad \alpha \in (\Sigma \cup V_1)^*\} = \{S, E, C\} = V$

P: $S \to aSa \mid bSb \mid \varepsilon$ proč ?

$C \to a$

$E \to \varepsilon$

b) $U_1 = \{X \mid X \in V,\ \exists \alpha, \beta \in (V \cup \Sigma)^*,\ S \Rightarrow^{*} \alpha X \beta\} = \{S\}$

$U_2 = U_1 = U$

P: $S \to aSa \mid bSb \mid \varepsilon$

popis