

LISTA 7

1) 2.2.

$$\textcircled{2} A(BA)^+ (a^* b^* \cup a^*) = (BA)^* BA^+ (B^* \cup \lambda)$$

↓

$$(BA)^* BA^+ (B^*)$$

$$BA(BA)^* (a^* b^* \cup a^*) = (BA)^* \cancel{BA} \cancel{A^*} \cancel{\lambda} B^*$$

$$BA(BA)^* (a^* b^* \cup a^*) = BA(BA)^* A^* B^*$$

$$BA(BA)^* A^* B^* = BA(BA)^* A^* B^*$$

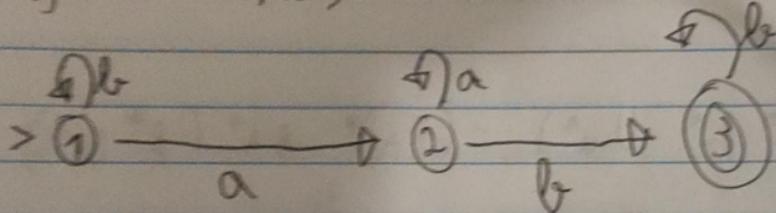
B)

$$B^+ (A^* B^* \cup \lambda) B = B(B^* A^* \cup \lambda) B^+$$

$$B^+ A^* B^* B = B B^* A^* B^+$$

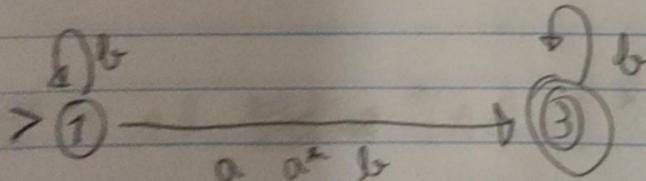
$$\begin{matrix} B^* & B & A^* & B^* & B \\ \checkmark & & & \checkmark & \\ V & & & V & \\ B^+ & A^* & B^+ & = & B^+ & A^* & B^+ \end{matrix}$$

③ A) $\Sigma = \{a, b\}$



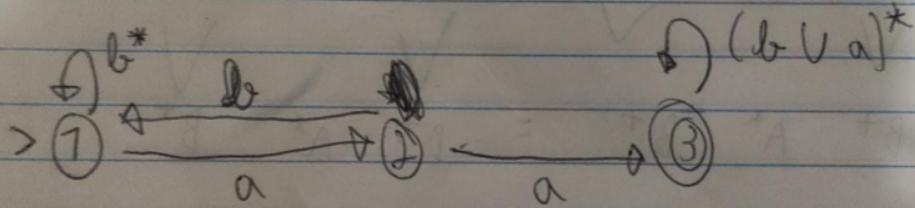
123 — a a* b

321 — X



L = { a* a* b b* }

$$B) \Sigma = \{a, b\}$$



323 - X

121 - ab

123 - aa

321 - X

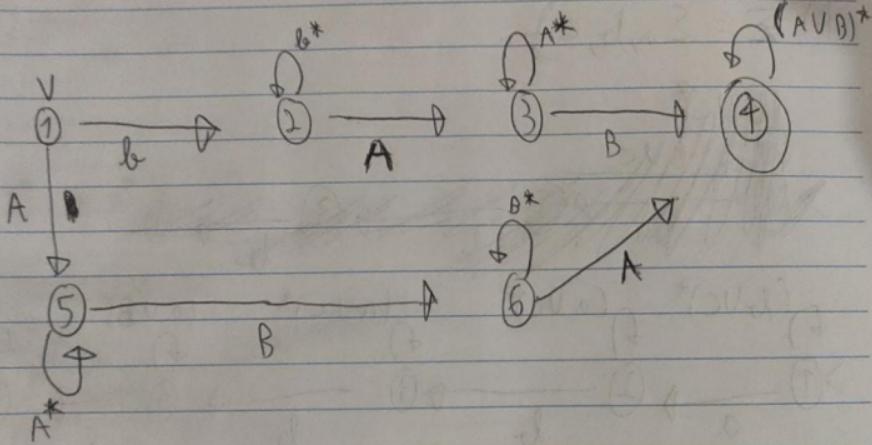
$$> \textcircled{1} \xrightarrow{\text{aa}} \textcircled{3} \xrightarrow{(b^* \cup ab)^*} (b \cup a)^*$$

$$(b^* \cup ab)^* aa (b \cup a)^*$$

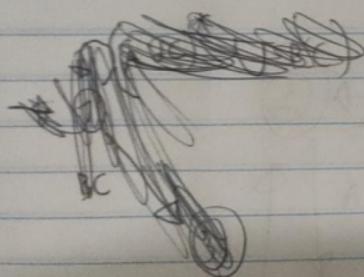
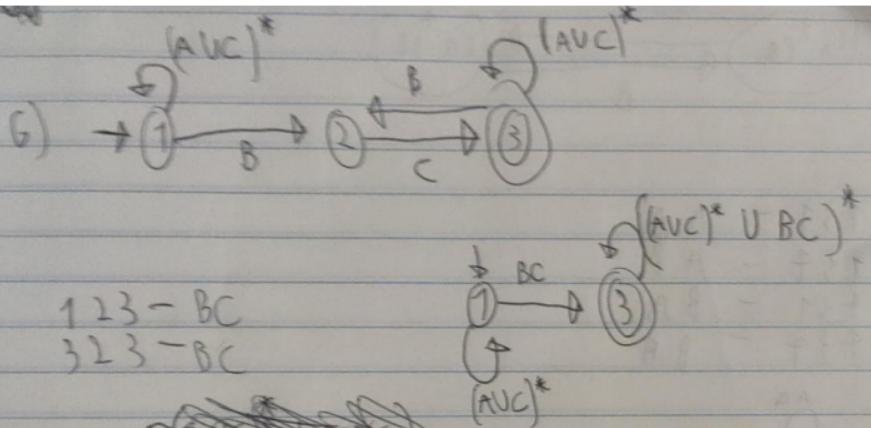
$$\hookrightarrow (b^* \cup ab) aa$$

D) A $(A \cup C)^*$ B $(A \cup C)^*$ B $(A \cup C)^*$ C \subset

E)



$$L = (B^+ A^+ B \cup A^+ B^+ A) (A \cup B)^*$$

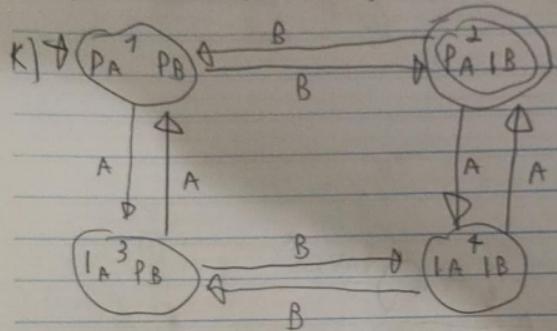


$$L = (AVC)^* \cdot BC \cdot ((AVC)^* \cup BC)^*$$

$$H) (A \cup B \cup C) \cap (A \cup B \cap C) \cap (A \cap B \cup C)$$

$$I) (\lambda \cup A \cup B \cup C) \cap (\lambda \cup A \cap B \cap C)$$

J) $(A \cup B \cup C)^+ (A \cup B \cup C)(A \cup B \cup C)(A \cup B \cup C)$

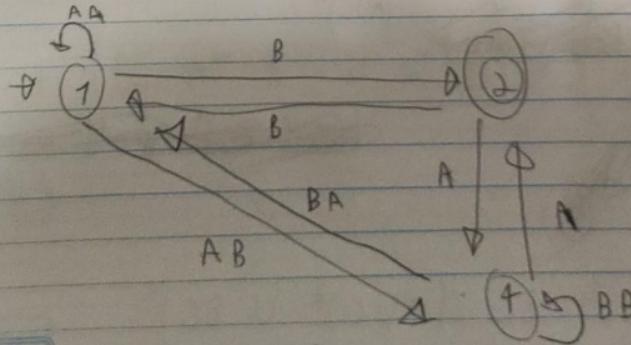


131 - AA

134 - AB

431 - BA

434 - BB



142 - $AB(BB)^* A$

241 - $A(BB)^* BA$

242 - $A(BB)^* A$

141 - $AB(BB)^* BA$

$A(BB)^* A = T$

$AA \cup AB(BB)^* BA = S$

$B \cup AB(BB)^* A = W$

①

+ ②

①

②

$B \cup A(BB)^* BA = Y$

$L = [AA \cup AB(BB)^* BA]^* W (T \cup Y S^* W)^*$