

Aufgabe 5

a)

$$\begin{aligned} S &\longrightarrow A_1 \\ A_1 &\longrightarrow aA_1 \mid \varepsilon \end{aligned}$$

$$\begin{aligned} S &\longrightarrow B_1 \\ B_1 &\longrightarrow bB_1 \mid \varepsilon \end{aligned}$$

$$\begin{aligned} S &\longrightarrow A_2B_2B_2 \\ A_2 &\longrightarrow A_2B_2B_2A_2 \mid a \\ B &\longrightarrow bB_2 \mid b \end{aligned}$$

$$\begin{aligned} S &\longrightarrow B_3A_3 \\ B_3 &\longrightarrow B_3A_3B_3 \mid b \\ A_3 &\longrightarrow aA_3 \mid a \end{aligned}$$