

$$3) S \rightarrow aSa | FbD | BE$$

$$T = \{S, A, B, C, D, E, F\}$$

$$A \rightarrow aA | CA | \epsilon$$

$$NT = \{a, b, c, d, e, f\}$$

$$B \rightarrow bB | FE$$

$$SP = T \cup \{\epsilon\}$$

$$C \rightarrow cCb | ACA$$

$$D \rightarrow Dd | fFc | c$$

$$① SP = \{a, b, c, d, e, f, \epsilon\}$$

$$E \rightarrow BE | eE | EB$$

$$Q = \{A, D\}$$

$$F \rightarrow fF | Dd$$

$$② SP = \{a, b, c, d, e, f, \epsilon, A, D\}$$

$$Q = \{C, F\}$$

$$③ SP = \{a, b, c, d, e, f, \epsilon, A, D, C, F\}$$

$$Q = \{S\}$$

$$④ SP = \{a, b, c, d, e, f, \epsilon, A, D, C, F, S\}$$

$$Q = \{\}$$

$$N' = \{A, C, D, F, S\} \rightarrow B, E : \text{improductivos}$$

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$$S \rightarrow aSa | FbD$$

$$SA = \{S\}$$

$$A \rightarrow aA | CA | \epsilon$$

$$M = \{\}$$

$$C \rightarrow cCb | ACA$$

$$① SA = \{S\}$$

$$D \rightarrow Dd | fFc | c$$

$$M = \{a, F, b, D\}$$

$$F \rightarrow fF | Dd$$

$$② SA = \{S, a, F, b, D\}$$

$$M = \{f, d, c\}$$

$$③ SA = \{S, a, F, b, D, f, d, c\}$$

$$M = \{\}$$

$$N' = SA \cap N = \{S, D, F\}$$

A e C inalcançáveis.

$$T' = SA \cap T = \{a, b, c, d, f\}$$

$$\begin{cases} S \rightarrow aSa | FbD \\ D \rightarrow Dd | fFc \\ F \rightarrow fF | Dd \end{cases}$$