

$$S \rightarrow AaaB \quad A \rightarrow x|y \quad B \rightarrow b$$

$$S \rightarrow aaB$$

$$S \rightarrow CC \quad C \rightarrow cC$$

$$A \rightarrow B \quad A \rightarrow a \quad B \rightarrow b | bAb$$

$$A \rightarrow a | b | bAb$$

$$A \rightarrow B \quad B \rightarrow C \quad C \rightarrow A$$

$$A \rightarrow \underbrace{BCDE}$$

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$$A \rightarrow Bz_1$$

$$A \rightarrow z_1z_2$$

$$z_1 \rightarrow Cz_2$$

$$z_1 \rightarrow BC$$

$$z_2 \rightarrow DE$$

$$z_2 \rightarrow DE$$

$$S \rightarrow AB$$

$$A \xrightarrow{*} a^k b^k \quad B \xrightarrow{*} b^k a^k$$

$$S \rightarrow \underbrace{a^k b^k a^k b^k}$$

$S \rightarrow C_b C_a \mid C_b D_1 \mid B D_2$
 $A \rightarrow a \mid C_a S$
 $B \rightarrow C_a C_b \mid b$
 $C_a \rightarrow a, C_b \rightarrow b$
 $D_1 \rightarrow C_a S, D_2 \rightarrow C_b D_3, D_3 \rightarrow C_b A$

CYK-Algorithmus (Cocke, Younger, Kasami)
 bbbaba $\in L$?

	b	b	b	a	b	a
1	B, C _b	B, C _b	B, C _b	A, C _a	B, C _b	A, C _a
2	-	-	S, D ₃	B	S, D ₃	////
3	-	D ₂	-	A	////	////
4	S	-	D ₃	////	////	////
5	-	D ₂	////	////	////	////
6	S	////	////	////	////	////

$S \Rightarrow B D_2 \Rightarrow b D_2 \Rightarrow b C_b D_3 \Rightarrow b b D_3$
 $\Rightarrow b b C_b A \Rightarrow b b b A \Rightarrow b b b C_a S$
 $\Rightarrow b b b a S \Rightarrow b b b a C_b C_a \Rightarrow b b b a b C_a$
 $\Rightarrow b b b a b a$

$\Rightarrow x$ muss auf g enden
 $x = \frac{1}{2} \bar{a} z a \wedge |x|_a = |x|_b$
 $|p|_a > |p|_b$
 Für jedes Präfix p von x gilt: