1. $\{ a^i b^{i+j} c^j \mid i \geq 0,\ j \geq 0 \}$

2. $\{ a^i b^j \mid 2i = 3j+1 \}$

3. $L = \{ w \in \{a,b\}^* \mid w = w^R \}$

4. $\{ b_i \# b_{i+1}^R \mid b_i \text{ is binary rep of integer } i,\ b_{i+1}^R \text{ is binary rep of } i+1 \}$

5. $\{a^n b^m \mid m \geq n \text{ and } m-n \text{ is even}\}$.

1. $\{ a^i b^{i+j} c^j \mid i \geq 0,\ j \geq 0 \}$

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3. $\{ w \in \{a,b\}^* \mid w = w^R \}$.

ε, a, b, aa, bb, aba, aaa, bab, bbb, . . . ,

abbabba, . .

Easy languages to practice on...

$L(a^*b^*)$

$L(a^+ba^+)$

$L((a+b)^*bba)$

3. $\{w \in \{a,b\}^* \mid w = w^R\}$.

Give a CFG for the above language and give a derivation tree for the string ababa

5. $\{a^n b^m \mid m \geq n \text{ and } m-n \text{ is odd}\}$.

Give a CFG for the above language and give a derivation tree for the string

aa bbbbb

b

b

5. $\{a^i b^j \mid 2i = 3j+1\}$