HW 5
2.4, 2.6, 2.16, 2.25
due Friday
Regular Grammars

right-linear

\[ \begin{align*}
B & \rightarrow a \\
B & \rightarrow aC \\
B & \rightarrow \varepsilon
\end{align*} \]

all rules look like these
Chomsky normal form

every rule is

\[ A \rightarrow BC \]
\[ A \rightarrow a \]

\[ S \rightarrow \epsilon \quad \text{where } S \text{ is start variable} \]
Any string of 0's and 1's

A → ε | 0A | 1A

all strings start w/ 000

B → 000 A

ends w/ 111

C → A 111

starts w/ 000 and ends w/ 111

D → BC

starts w/ 000 or ends w/ 111

E → B

E → C

E → B | C
starts and ends w/ 1

\[ F \rightarrow 1 A 1 \mid '1 \]

doesn't (start and end) w/ 1

\[ G \rightarrow OA O \mid OA 1 \mid 1 A O \mid 0 \]
\[ \exists w^R \mid w \epsilon \{0,1\}^* \]

\[ H \rightarrow 1H1|0HOx \]

\[ \exists w^x \epsilon \{0,1\}^* \mid x \epsilon \{a,b\}^* \]

\[ I \rightarrow O10|111|OJ01J \]

\[ J \rightarrow aJa|bJb|x \]
\[ \Sigma = \{a, b, c\} \]

\[ S \rightarrow A | B | C \]

\[ A \rightarrow D E \]

\[ D \rightarrow a D b | \varepsilon \]

\[ E \rightarrow c E | \varepsilon \]