

3/17 (3) 1.6 Rewriting System

4. terminologies

symbol $a, b, c \in V$ vocabulary V
(alphabet)

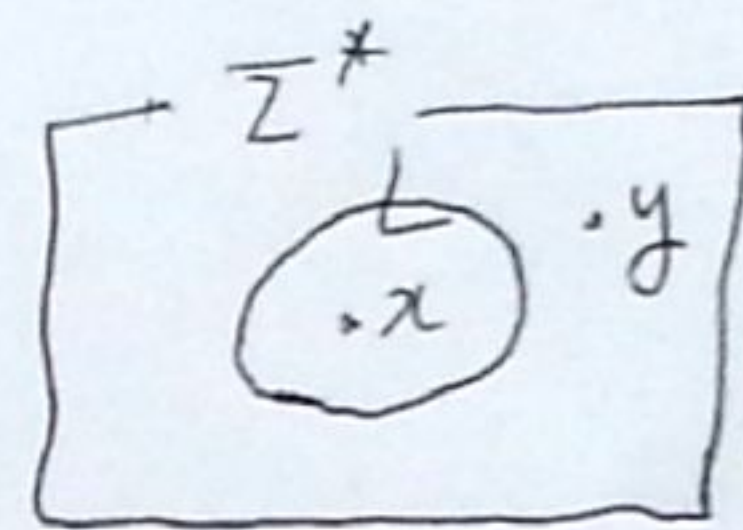
string $x, y, z \in V^*$ language $L \subseteq V^*$ or $L \in 2^{V^*}$

(V, P) is a rewriting system. Consider free monoid (V^*, \cdot, ϵ)

If V is a set of symbols and vocabulary

$$P \subseteq V^* \times V^*$$

$$w_1, w_2 \in V^*, (w_1 \rightarrow w_2) \in P$$



$x \in L$
 $y \notin L$

\rightarrow , \Rightarrow , \Rightarrow^*

\Rightarrow^r , \Rightarrow^π , $r \in P, \pi \in P^*$

EX: $\exists \pi \in P^*$ 之 銘 各
各 可 各 非 常 各
* Let A be a set
 $id_A = \{ \epsilon, a \mid a \in A \}$