

concatenation

4-1 / $A \circ B$

$$jm \circ x = jm x$$

$$\{jm\} \circ \{x, y\}$$

$$w \in A \circ B$$

$$= \{jm \circ x,$$

$$\text{iff } \exists xy w = xoy$$

$$jm \circ y\}$$

where $x \in A$

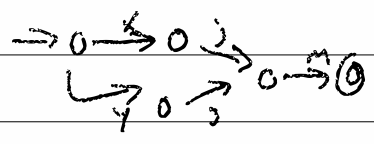
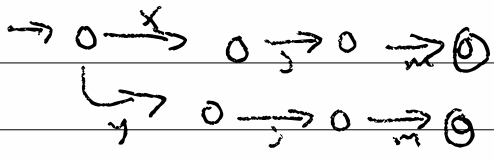
and $y \in B$.

$$\{jm\} = \begin{array}{c} \boxed{\rightarrow 0 \xrightarrow{j} 0 \xrightarrow{m} \odot} \\ \rightarrow 0 \end{array}$$

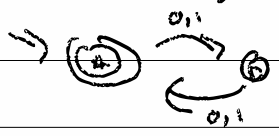
$$\{x, y\} = \begin{array}{c} \rightarrow 0 \xrightarrow{x} \odot \\ \rightarrow y \odot \end{array}$$

$$\{jm x, jm y\} = \begin{array}{c} \boxed{\rightarrow 0 \xrightarrow{j} 0 \xrightarrow{m} 0 \xrightarrow{x} \odot} \\ \boxed{\rightarrow y \odot} \end{array}$$

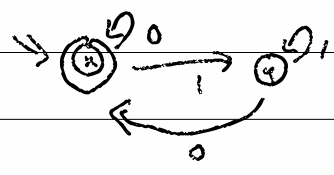
9-2/ $\{x, y\} \circ \{j, m\}$



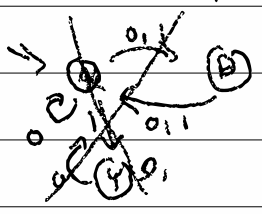
even length



even num

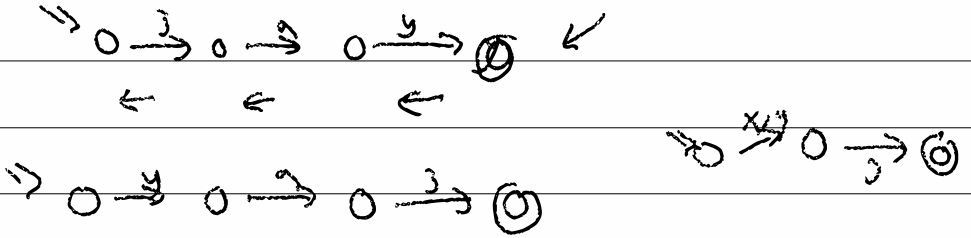


even len \circ even num = even num



4-3/ $jay^R = yaj$

NFA



$\{jx, jy\}$

$\{xj, yj\}$

