

$$\text{Sat}(a \leftrightarrow b)$$

$$\text{Sat}(\exists (a \vee b) \wedge (a \wedge b))$$

$$\text{Sat}(\exists \square (a \vee \neg b))$$

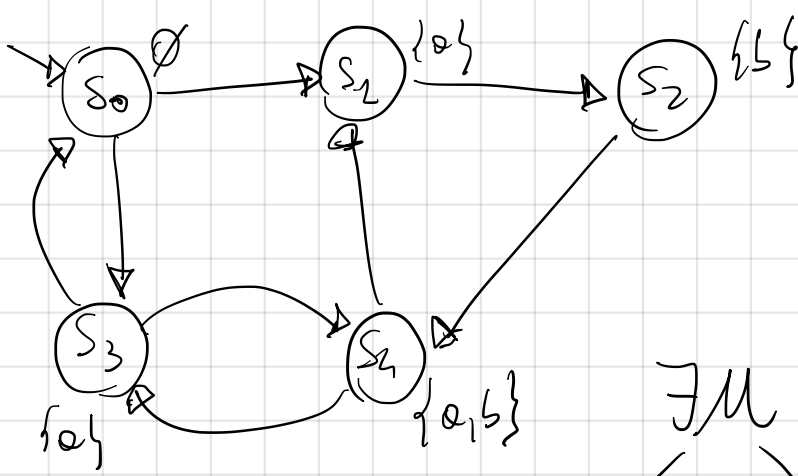
$$a \leftrightarrow b \equiv a \rightarrow b \wedge b \rightarrow a \equiv$$

$$\text{Sat}(a \leftrightarrow b) = \text{Sat}((\neg a \vee b) \wedge (\neg b \vee a)) \equiv (\neg a \vee b) \wedge (\neg b \vee a)$$

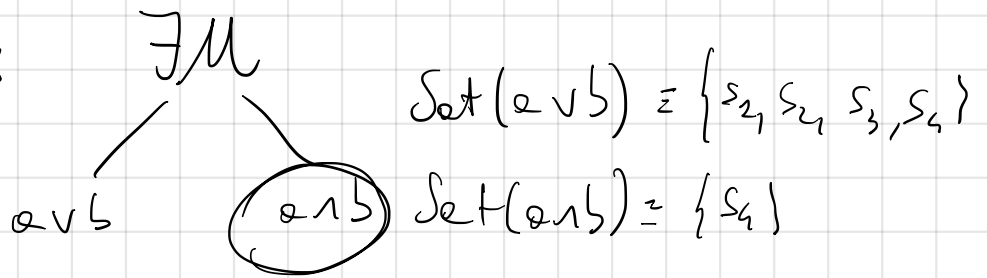
$$= \text{Sat}(\neg a \vee b) \wedge \text{Sat}(\neg b \vee a) \equiv \left(\text{Sat}(\neg a) \cup \text{Sat}(b) \right) \wedge \left(\text{Sat}(\neg b) \cup \text{Sat}(a) \right)$$

$$= \left(\{s_0, s_2\} \cup \{s_2, s_4\} \right) \wedge \left(\{s_0, s_2, s_3\} \cup \{s_2, s_3, s_4\} \right) \equiv$$

$$= \{s_0, s_2, s_4\} \wedge \{s_0, s_2, s_3, s_4\} = \{s_0, s_4\}$$



$\text{Set}(a \leftrightarrow b)$
 $\text{Set}(\exists (a \vee b) \wedge (a \wedge b))$
 $\text{Set}(\exists \square (a \vee \neg b))$



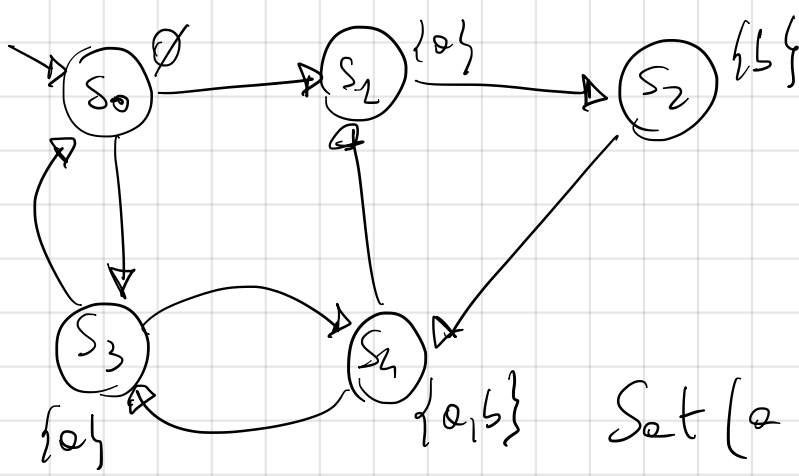
$$T^0 = \text{Set}(a \wedge b) = \{s_4\}$$

$$T^1 = \bigcup_{T^0 \cup} \{s \in \text{Set}(a \vee b) \mid s' \in \text{Post}(s) \wedge s' \in T^0\} = \{s_1, s_2, s_3\}$$

$$T^2 = \{s_1, s_2, s_3, s_4\}$$

$$T^3 = \{s_1, s_2, s_3, s_4\} \leftarrow \text{Minimal fixpoint}$$

$$\text{Set}(\exists (a \vee b) \wedge (a \wedge b)) = \{s_1, s_2, s_3, s_4\}$$



$$\text{Sat}(a \leftrightarrow b)$$

$$\text{Sat}(\exists (a \vee b) \wedge (a \wedge b))$$

$$\text{Sat}(\exists \square (a \vee \neg b))$$

$$\text{Sat}(a \vee \neg b) = \{s_0, s_2, s_3, s_4\}$$

$$T^0 = \{s_0, s_2, s_3, s_4\}$$

$$T^1 = T^0 \setminus \{s \in T^0 \mid \forall s' \ s' \in \text{Post}(s) \rightarrow s' \notin T^0\} =$$

$$\{s_0, s_3, s_4\}$$

$$\text{Sat}(\exists \square (a \vee \neg b)) = \{s_0, s_3, s_4\}$$

$$T^2 = \{s_0, s_3, s_4\} \leftarrow \text{greatest fixpoint}$$