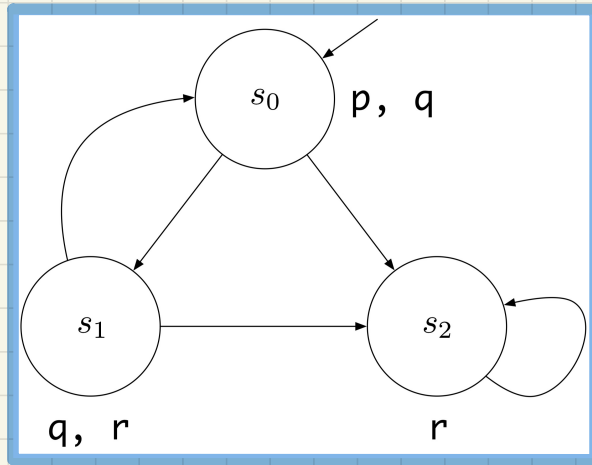


Model Satisfaction: Exercises (7.1)



$s \models \phi \Leftrightarrow$ all π starting at s , $\pi \models \phi$

$s_2 \not\models p \cup r$

True

$s_2 \not\models p \mathbf{W} r$

True

$s_2 \not\models r \mathbf{R} p$

False

(2) $\neg(\Box p)$

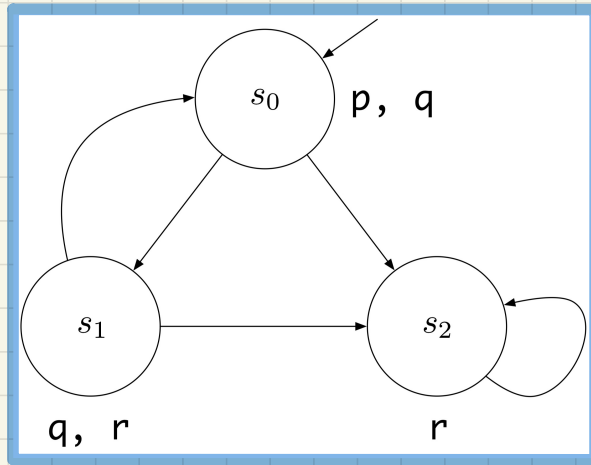
Witness:

$r \rightarrow r \rightarrow r \rightarrow \dots$

(1) when r is sat.,
 p is never sat.

Exercise: What if we change the LHS to s_2 ?

Model Satisfaction: Exercises (7.2)



$s \models \phi \Leftrightarrow$ all π starting at s , $\pi \models \phi$

$S_2 \not\models (p \vee r) \cup (p \wedge r)$

fake

WITNESS: $\gamma \rightarrow \gamma \rightarrow \dots$

$\neg(F(p \wedge r))$

$S_2 \not\models (p \vee r) \text{ W } (p \wedge r)$

true $G(p \vee r)$

$S_2 \not\models (p \wedge r) \text{ R } (p \vee r)$

true $G(p \vee r)$

Exercise: What if we change the LHS to s_2 ?