

$(\mathbf{M}, s_1) \models \mathbf{K}_1((\mathbf{a} \wedge \mathbf{b}))$ iff $(\mathbf{M}, t) \models (\mathbf{a} \wedge \mathbf{b})$ for all t with $(s_1, t) \in R_1$.

$(\mathbf{M}, s_2) \models (\mathbf{a} \wedge \mathbf{b})$ iff $(\mathbf{M}, s_2) \models \mathbf{a}$ and $(\mathbf{M}, s_2) \models \mathbf{b}$.

$(\mathbf{M}, s_2) \models \mathbf{a}$ iff $\pi(s_2)(a) = 1$.

$(\mathbf{M}, s_2) \models \mathbf{a}$ holds since $\pi(s_2)(a) = 1$.

$(\mathbf{M}, s_2) \models \mathbf{b}$ iff $\pi(s_2)(b) = 1$.

$(\mathbf{M}, s_2) \models \mathbf{b}$ does not hold since $\pi(s_2)(b) = 0$.

$(\mathbf{M}, s_2) \models (\mathbf{a} \wedge \mathbf{b})$ does not hold since $(\mathbf{M}, s_2) \models \mathbf{b}$ does not hold.

$(\mathbf{M}, s_1) \models \mathbf{K}_1((\mathbf{a} \wedge \mathbf{b}))$ does not hold since $(\mathbf{M}, s_2) \models (\mathbf{a} \wedge \mathbf{b})$ does not hold.