

$$\begin{aligned}
& \forall t \forall y \forall t' \forall y' ((R_{S_0}(t, y) \wedge I(t, y) \wedge K_{q_1}(t) \wedge F(t, t') \wedge F(y, y')) \\
& \quad \rightarrow (I(t', y') \wedge R_{S_1}(t', y) \wedge K_{q_2}(t')) \\
& \quad \wedge \forall z (F(z, y') \vee ((R_{S_0}(t, z) \rightarrow R_{S_0}(t', z)) \wedge \\
& \quad (R_{S_1}(t, z) \rightarrow R_{S_1}(t', z)) \wedge (R_{S_2}(t, z) \rightarrow R_{S_2}(t', z)))))) \wedge \\
& \forall t \forall y \forall t' \forall y' ((R_{S_0}(t, y) \wedge I(t, y) \wedge K_{q_2}(t) \wedge F(t, t') \wedge F(y, y')) \\
& \quad \rightarrow (I(t', y') \wedge R_{S_0}(t', y) \wedge K_{q_3}(t')) \\
& \quad \wedge \forall z (F(z, y') \vee ((R_{S_0}(t, z) \rightarrow R_{S_0}(t', z)) \wedge \\
& \quad (R_{S_1}(t, z) \rightarrow R_{S_1}(t', z)) \wedge (R_{S_2}(t, z) \rightarrow R_{S_2}(t', z)))))) \wedge \\
& \forall t \forall y \forall t' \forall y' ((R_{S_0}(t, y) \wedge I(t, y) \wedge K_{q_3}(t) \wedge F(t, t') \wedge F(y, y')) \\
& \quad \rightarrow (I(t', y') \wedge R_{S_2}(t', y) \wedge K_{q_4}(t')) \\
& \quad \wedge \forall z (F(z, y') \vee ((R_{S_0}(t, z) \rightarrow R_{S_0}(t', z)) \wedge \\
& \quad (R_{S_1}(t, z) \rightarrow R_{S_1}(t', z)) \wedge (R_{S_2}(t, z) \rightarrow R_{S_2}(t', z)))))) \wedge \\
& \forall t \forall y \forall t' \forall y' ((R_{S_0}(t, y) \wedge I(t, y) \wedge K_{q_4}(t) \wedge F(t, t') \wedge F(y, y')) \\
& \quad \rightarrow (I(t', y') \wedge R_{S_0}(t', y) \wedge K_{q_1}(t')) \\
& \quad \wedge \forall z (F(z, y') \vee ((R_{S_0}(t, z) \rightarrow R_{S_0}(t', z)) \wedge \\
& \quad (R_{S_1}(t, z) \rightarrow R_{S_1}(t', z)) \wedge (R_{S_2}(t, z) \rightarrow R_{S_2}(t', z))))))
\end{aligned}$$