

$$\begin{aligned}
 \text{Move}X &\triangleq \\
 &\wedge \text{nextTurn} = \text{"X"} \quad \text{Only enabled on } X\text{'s turn} \\
 &\wedge \neg \text{Won}(\text{"O"}) \quad \text{And } X \text{ has not won} \\
 &\quad \text{This specifies the spots } X \text{ will move on } X\text{'s turn} \\
 &\wedge \vee \wedge \text{BoardEmpty} \\
 &\quad \wedge \text{StartInCorner} \\
 &\quad \vee \wedge \neg \text{BoardEmpty} \quad \text{If it's not the start} \\
 &\quad \wedge \vee \wedge \text{CanWin} \\
 &\quad \quad \wedge \text{Win} \\
 &\quad \vee \wedge \neg \text{CanWin} \\
 &\quad \quad \wedge \vee \wedge \text{CanBlockWin} \\
 &\quad \quad \quad \wedge \text{BlockWin} \\
 &\quad \quad \vee \wedge \neg \text{CanBlockWin} \\
 &\quad \quad \wedge \vee \wedge \text{CanTakeCenter} \\
 &\quad \quad \quad \wedge \text{TakeCenter} \\
 &\quad \quad \vee \wedge \neg \text{CanTakeCenter} \\
 &\quad \quad \quad \wedge \vee \wedge \text{CanSetupWin} \\
 &\quad \quad \quad \quad \wedge \text{SetupWin} \\
 &\quad \quad \quad \vee \wedge \neg \text{CanSetupWin} \\
 &\quad \quad \quad \quad \wedge \text{MoveToEmpty}(\text{"X"}) \quad \text{No more strategies. Pick spot} \\
 &\wedge \text{nextTurn}' = \text{"O"} \quad \text{The future state of next turn is } O
 \end{aligned}$$