

$$\begin{aligned} 0p1' &= 0p1 \\ 0p2_1' &= 0p2_1 - 1 \\ 0p2_2' &= 0p2_2 \\ 0p2_3' &= 1 \end{aligned}$$

$$\begin{aligned} 0p1'' &= 0p1' \\ 0p2_1'' &= 0p2_1' \\ 0p2_2'' &= 0p2_2' \\ 0p2_3'' &= 0 \end{aligned}$$

$$\begin{aligned} 0p1''' &= 0p1'' \\ 0p2_1''' &= 0 \\ 0p2_2''' &= 0p2_1'' + 0p2_2'' \end{aligned}$$

Quantifier Elimination using
Princess [Rümmer, 2008]

$$\begin{aligned} 0p1''' &= 0p1 \\ 0p2_1''' &= 0 \\ 0p2_2''' &= 0p2_1 + 0p2_2 - 1 \end{aligned}$$