$$\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{\dfrac{}{p(\_X()), p(\_X(\_y)), [p(\_X())] \vdash p(\_y), (p(\_X()) \Rightarrow \forall y.p(y)), (p(\_X(\_y)) \Rightarrow \forall y.p(y)), \forall y.p(y), \exists x.(p(x) \Rightarrow \forall y.p(y))}\,\text{iniL}}{p(\_X()), p(\_X(\_y)) \vdash p(\_y), (p(\_X()) \Rightarrow \forall y.p(y)), (p(\_X(\_y)) \Rightarrow \forall y.p(y)), \forall y.p(y), \exists x.(p(x) \Rightarrow \forall y.p(y))}\,\text{left-sel}}{p(\_X(\_y)) \vdash [(p(\_X()) \Rightarrow \forall y.p(y))], p(\_y), (p(\_X()) \Rightarrow \forall y.p(y)), (p(\_X(\_y)) \Rightarrow \forall y.p(y)), \forall y.p(y), \exists x.(p(x) \Rightarrow \forall y.p(y))}\,\Rightarrow R}{p(\_X(\_y)) \vdash p(\_y), (p(\_X()) \Rightarrow \forall y.p(y)), (p(\_X(\_y)) \Rightarrow \forall y.p(y)), \forall y.p(y), \exists x.(p(x) \Rightarrow \forall y.p(y))}\,\text{right-sel}}{p(\_X(\_y)) \vdash [\exists x.(p(x) \Rightarrow \forall y.p(y))], p(\_y), (p(\_X(\_y)) \Rightarrow \forall y.p(y)), \forall y.p(y), \exists x.(p(x) \Rightarrow \forall y.p(y))}\,\exists R}{p(\_X(\_y)) \vdash p(\_y), (p(\_X(\_y)) \Rightarrow \forall y.p(y)), \forall y.p(y), \exists x.(p(x) \Rightarrow \forall y.p(y))}\,\text{right-sel}}{p(\_X()) \vdash [\forall y.p(y)], (p(\_X()) \Rightarrow \forall y.p(y)), \forall y.p(y), \exists x.(p(x) \Rightarrow \forall y.p(y))}\,\forall R}{p(\_X()) \vdash (p(\_X()) \Rightarrow \forall y.p(y)), \forall y.p(y), \exists x.(p(x) \Rightarrow \forall y.p(y))}\,\text{right-sel}}{\vdash [(p(\_X()) \Rightarrow \forall y.p(y))], (p(\_X()) \Rightarrow \forall y.p(y)), \exists x.(p(x) \Rightarrow \forall y.p(y))}\,\Rightarrow R}{\vdash (p(\_X()) \Rightarrow \forall y.p(y)), \exists x.(p(x) \Rightarrow \forall y.p(y))}\,\text{right-sel}}{\vdash [\exists x.(p(x) \Rightarrow \forall y.p(y))], \exists x.(p(x) \Rightarrow \forall y.p(y))}\,\exists R}{\vdash \exists x.(p(x) \Rightarrow \forall y.p(y))}\,\text{right-sel}$$