$\sigma = \exists X. (P(X) \Rightarrow \forall X. P(X))$

$$\begin{aligned}
\neg\sigma &= \neg \exists X. (P(X) \Rightarrow \forall X. P(X)) \\
&= \forall X. (\neg(\neg P(X) \vee \forall X. P(X))) \\
&= \forall X. (P(X) \wedge \neg\forall X. P(X)) \\
&= \forall X. (P(X) \wedge \exists X. \neg P(X)) \\
&= \forall X. (P(X) \wedge \exists Y. \neg P(Y)) && \text{Renombre: } \exists X \to \exists Y \\
&= \forall X. \exists Y. (P(X) \wedge \neg P(Y)) \\
&= \forall X. (P(X) \wedge \neg P(f(X))) \\
&= \forall X. P(X) \wedge \forall X. \neg P(f(X)) \\
&= \{\underbrace{\{P(X_1)\}}_{1}, \underbrace{\{\neg P(f(X_2))\}}_{2}\} = C
\end{aligned}$$

1 y 2: $\text{mgu}\{P(X_1) \doteq P(f(X_2))\}$

$= \text{mgu}\{X_1 \doteq f(X_2)\}$ decompose

$= \text{mgu}\{\}$ $\text{elim}\{X_1 := f(X_2)\}$

$3 = \{\}$

$C \vdash \bot \Rightarrow \neg\sigma \vdash \bot \Rightarrow \vdash \sigma$

$\therefore$ σ válida