## t13_member_1 (TML6Saie3Q8EmQ5SVwz6ehjh23QtfRz3ysx)

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Let $v 1 \_$membered : $\iota \Rightarrow 0$ be given. Let $r 1 \_$tarski : $\iota \Rightarrow \iota \Rightarrow 0$ be given. Let $k 5 \_m e m b e r \_1: \iota \Rightarrow \iota$ be given. Assume the following.
$\forall X 0 .\left(v 1 \_m e m b e r e d \quad X 0\right) \Rightarrow\left(\forall X 1 .\left(v 1 \_m e m b e r e d X 1\right) \Rightarrow((\right.$
$\left.\left.\left.r 1 \_t a r s k i X 0 X 1\right) \Rightarrow\left(r 1 \_t a r s k i\left(k 5 \_m e m b e r \_1 ~ X 0\right)\left(k 5 \_m e m b e r \_1 ~ X 1\right)\right)\right)\right)$
Assume the following.

$$
\begin{equation*}
\forall X 0 .\left(v 1 \_m e m b e r e d X 0\right) \Rightarrow\left(k 5 \_m e m b e r \_1\left(k 5 \_m e m b e r \_1 X 0\right)=X 0\right) \tag{2}
\end{equation*}
$$

Assume the following.

$$
\begin{equation*}
\forall X 0 .\left(v 1 \_m e m b e r e d \quad X 0\right) \Rightarrow\left(v 1 \_m e m b e r e d\left(k 5 \_m e m b e r \_1 X 0\right)\right) \tag{3}
\end{equation*}
$$

## Theorem 1

$\forall X 0 .\left(v 1 \_m e m b e r e d ~ X 0\right) \Rightarrow\left(\forall X 1 .\left(v 1 \_m e m b e r e d ~ X 1\right) \Rightarrow((\right.$
$\left.\left.\left.r 1 \_t a r s k i X 0 X 1\right) \Leftrightarrow\left(r 1 \_t a r s k i\left(k 5 \_m e m b e r \_1 \quad X 0\right)\left(k 5 \_m e m b e r \_1 X 1\right)\right)\right)\right)$

