# t148_member_1 (TMRNopNcCUWphkhaUdKeyPehULoVtSMXGHa) 

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Let $v 1_{\_}$membered $: \iota \Rightarrow 0$ be given. Let $v 1 \_x c m p l x_{-} 0: \iota \Rightarrow 0$ be given. Let $k 17 \_$member_1 : $\iota \Rightarrow \iota \Rightarrow \iota$ be given. Let k9_member_1 : $\iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k 1 \_$tarski : $\iota \Rightarrow \iota$ be given. Assume the following.
$\forall X 0 .\left(v 1 \_m e m b e r e d ~ X 0\right) \Rightarrow\left(\forall X 1\right.$. $\left(v 1 \_m e m b e r e d ~ X 1\right) \Rightarrow(\forall X 2$.
$\left(v 1 \_m e m b e r e d ~ X 2\right) \Rightarrow\left(k 9 \_m e m b e r \_1\left(k 9 \_m e m b e r \_1 X 0 X 1\right) X 2=k 9 \_m e m b e r \_1\right.$ X0 (k9_member_1 X1 X2))))

Assume the following.

$$
\begin{equation*}
\forall X 0 .\left(v 1 \_x c m p l x \_0 X 0\right) \Rightarrow\left(v 1 \_m e m b e r e d\left(k 1 \_t a r s k i X 0\right)\right) \tag{2}
\end{equation*}
$$

Assume the following.

$$
\begin{gather*}
\forall X 0 . \forall X 1 .\left(\left(v 1 \_m e m b e r e d X 0\right) \wedge\left(v 1 \_m e m b e r e d ~ X 1\right)\right) \Rightarrow(  \tag{3}\\
\left.v 1 \_m e m b e r e d ~\left(k 9 \_m e m b e r \_1 X 0 X 1\right)\right)
\end{gather*}
$$

Assume the following.

$$
\begin{gather*}
\forall X 0 .\left(v 1 \_m e m b e r e d X 0\right) \Rightarrow\left(\forall X 1 .\left(v 1 \_x c m p l x \_0 X 1\right) \Rightarrow\left(k 17 \_m e m b e r \_1\right.\right. \\
\left.\left.X 0 X 1=k 9 \_m e m b e r \_1\left(k 1 \_t a r s k i X 1\right) X 0\right)\right) \tag{4}
\end{gather*}
$$

## Theorem 1

$\forall X 0 .\left(v 1 \_m e m b e r e d ~ X 0\right) \Rightarrow\left(\forall X 1 .\left(v 1 \_m e m b e r e d ~ X 1\right) \Rightarrow(\forall X 2\right.$.
$\left(v 1 \_x c m p l x_{-} 0 X 2\right) \Rightarrow\left(k 17 \_m e m b e r \_1\right.$ ( $\left.k 9 \_m e m b e r_{-} 1 X 0 X 1\right) X 2=k 9 \_m e m b e r_{-} 1$
( $\left.\left.\left.\left.k 17 \_m e m b e r \_1 ~ X 0 ~ X 2\right) ~ X 1\right)\right) ~\right) ~$

