# t1_member_1 (TMamogAiNuZ- <br> JaVWXMAP1Vyvt28pCH9kUp16) 

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Let $v 2 \_$membered : $\iota \Rightarrow o$ be given. Let $v 1 \_x x r e a l \_0: ~ \iota \Rightarrow o$ be given. Let $k 2 \_x$ xreal_3 : $\iota \Rightarrow \iota$ be given. Let $k 4_{\_}$member_1 : $\iota \Rightarrow \iota$ be given. Let m1_subset_1 : $\iota \Rightarrow \iota \Rightarrow o$ be given. Let $k 7 \_n u m b e r s: \iota$ be given. Let $k 1_{-}$member_1 : $\iota \Rightarrow \iota$ be given. Assume the following.

$$
\begin{equation*}
\forall X 0 . \forall X 1 .(X 0 \in X 1) \Rightarrow\left(m 1 \_s u b s e t \_1 X 0 X 1\right) \tag{1}
\end{equation*}
$$

Assume the following.
$\forall X 0 .\left(m 1 \_s u b s e t \_1 \quad X 0\right.$ k7_numbers $) \Rightarrow\left(k 1 \_m e m b e r \_1 X 0=k 2 \_x x r e a l \_3\right.$

$$
\begin{equation*}
X 0) \tag{2}
\end{equation*}
$$

Assume the following.

$$
\begin{equation*}
\forall X 0 .\left(v 2 \_m e m b e r e d X 0\right) \Rightarrow\left(k 4 \_m e m b e r \_1\left(k 4 \_m e m b e r \_1 X 0\right)=X 0\right) \tag{3}
\end{equation*}
$$

Assume the following.

$$
\begin{equation*}
\forall X 0 .\left(v 1 \_x x r e a l \_0 X 0\right) \Rightarrow\left(k 2 \_x x r e a l \_3\left(k 2 \_x x r e a l \_3 X 0\right)=X 0\right) \tag{4}
\end{equation*}
$$

Assume the following.

$$
\begin{equation*}
\forall X 0 .\left(v 2 \_m e m b e r e d ~ X 0\right) \Rightarrow\left(v 2 \_m e m b e r e d ~\left(k 4 \_m e m b e r \_1 X 0\right)\right) \tag{5}
\end{equation*}
$$

Assume the following.

$$
\begin{equation*}
\forall X 0 .\left(v 1 \_x x r e a l \_0 X 0\right) \Rightarrow\left(v 1 \_x x r e a l \_0\left(k 2 \_x x r e a l \_3 X 0\right)\right) \tag{6}
\end{equation*}
$$

Assume the following.

$$
\begin{equation*}
\forall X 0 .\left(v 1 \_x x r e a l \_0 X 0\right) \Leftrightarrow\left(X 0 \in k 7 \_n u m b e r s\right) \tag{7}
\end{equation*}
$$

Assume the following.

$$
\begin{gathered}
\forall X 0 .\left(v 2 \_ \text {membered } X 0\right) \Rightarrow\left(k 4 \_ \text {member_ } 1 X 0=\text { ReplSep }(\text { toset }( \right. \\
\left.\left.\lambda X 1: \iota . m 1 \_s u b s e t \_1 X 1 \text { k7_numbers }\right)\right)(\lambda X 1: \iota . X 1 \in X 0)( \\
\left.\left.\lambda X 1: \iota . k 1 \_m e m b e r \_1 X 1\right)\right)
\end{gathered}
$$

## Theorem 1

$$
\begin{aligned}
& \forall X 0 .\left(v 2 \_ \text {membered } X 0\right) \Rightarrow\left(\forall X 1 .\left(v 1 \_x x r e a l \_0 X 1\right) \Rightarrow(( \right. \\
& \left.\left.X 1 \in X 0) \Leftrightarrow\left(k 2 \_x x r e a l \_3 X 1 \in k 4 \_m e m b e r \_1 X 0\right)\right)\right)
\end{aligned}
$$

