

t122\_member\_1  
(TMYk4arJHZo1RKdU7mea5XMF E91bWv6qFZC)

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Let  $v1\_membered : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k15\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_member\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_membered X0) \Rightarrow (\forall X1.(v1\_membered X1) \Rightarrow (\forall X2. \\ & (v1\_membered X2) \Rightarrow (r1\_tarski (k13\_member\_1 X0 (k9\_member\_1 X1 \\ & X2)) (k9\_member\_1 (k13\_member\_1 X0 X1) (k13\_member\_1 X0 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_membered X0) \wedge (v1\_membered X1)) \Rightarrow (v1\_membered (k9\_member\_1 X0 X1)) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_membered X0) \Rightarrow (v1\_membered (k7\_member\_1 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_membered X0) \Rightarrow (\forall X1.(v1\_membered X1) \Rightarrow (k15\_member\_1 X0 X1 = k13\_member\_1 X0 (k7\_member\_1 X1))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_membered X0) \wedge (v1\_membered X1)) \Rightarrow (k13\_member\_1 X0 X1 = k13\_member\_1 X1 X0) \quad (5)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v1\_membered X0) \Rightarrow (\forall X1.(v1\_membered X1) \Rightarrow (\forall X2. \\ & (v1\_membered X2) \Rightarrow (r1\_tarski (k15\_member\_1 (k9\_member\_1 X0 X1) \\ & X2) (k9\_member\_1 (k15\_member\_1 X0 X2) (k15\_member\_1 X1 X2)))))) \end{aligned}$$