t117_member_1
(TMaD957BJuNuasHDhibjXKgxxkpki4DKyfS)

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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 $k13\_member\_1 : \iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Let $k7\_member\_1 : \iota{\Rightarrow}\iota$ be given. Assume the following.

$$\forall X0.(v1\_membered\ X0){\Rightarrow}(\forall X1.(v1\_membered\ X1){\Rightarrow}(\forall X2.$$
$$(v1\_membered\ X2){\Rightarrow}(\forall X3.(v1\_membered\ X3){\Rightarrow}(((r1\_tarski$$
$$X0\ X1)\wedge(r1\_tarski\ X2\ X3)){\Rightarrow}(r1\_tarski\ (k13\_member\_1\ X0\ X2)\ (k13\_member\_1$$
$$X1\ X3))))))$$

(1)

Assume the following.

$$\forall X0.\forall X1.(v1\_membered\ X1){\Rightarrow}((r1\_tarski\ X0\ X1){\Rightarrow}(v1\_membered$$
$$X0))$$

(2)

Assume the following.

$$\forall X0.(v1\_membered\ X0){\Rightarrow}(\forall X1.(v1\_membered\ X1){\Rightarrow}((($$
$$r1\_tarski\ X0\ X1){\Rightarrow}(r1\_tarski\ (k7\_member\_1\ X0)\ (k7\_member\_1\ X1))))$$

(3)

Assume the following.

$$\forall X0.(v1\_membered\ X0){\Rightarrow}(v1\_membered\ (k7\_member\_1\ X0)) \qquad (4)$$

Assume the following.

$$\forall X0.(v1\_membered\ X0){\Rightarrow}(\forall X1.(v1\_membered\ X1){\Rightarrow}(k15\_member\_1$$
$$X0\ X1 = k13\_member\_1\ X0\ (k7\_member\_1\ X1))) \qquad (5)$$

Theorem 1

$$\forall X0.(v1\_membered\ X0){\Rightarrow}(\forall X1.(v1\_membered\ X1){\Rightarrow}(\forall X2.$$
$$(v1\_membered\ X2){\Rightarrow}(\forall X3.(v1\_membered\ X3){\Rightarrow}(((r1\_tarski$$
$$X0\ X1)\wedge(r1\_tarski\ X2\ X3)){\Rightarrow}(r1\_tarski\ (k15\_member\_1\ X0\ X2)\ (k15\_member\_1$$
$$X1\ X3))))))$$