t138_member_1 (TMbi6hMnhmq9vzSu8PqmmhP2zPhLPJ1Vrgp)

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Let $v2\_membered : \iota \Rightarrow o$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k8\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_numbers : \iota$ be given. Let $k1\_xxreal\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.k6\_subset\_1\ X0\ X1 = k4\_xboole\_0\ X0\ X1 \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (v2\_membered\ (k1\_tarski\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v2\_membered\ X0) \wedge (v1\_xxreal\_0\ X1)) \Rightarrow (v2\_membered\ (k16\_member\_1\ X0\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(v2\_membered\ X0) \Rightarrow (v2\_membered\ (k4\_xboole\_0\ X0\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.m1\_subset\_1\ (k6\_subset\_1\ X0\ X1)\ (k1\_zfmisc\_1\ X0) \tag{6}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0) \Rightarrow (\forall X1.(r1\_tarski\ X0\ X1) \Leftrightarrow (\forall X2.(v1\_xxreal\_0\ X2) \Rightarrow ((X2 \in X0) \Rightarrow (X2 \in X1)))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k4\_xboole\_0\ X0\ X1)\Leftrightarrow(\forall X3.\ (X3 \in X2)\Leftrightarrow((X3 \in X0)\wedge(\neg X3 \in X1))) \tag{8}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(\forall X1.(v2\_membered\ X1)\Rightarrow(k8\_member\_1\ X0\ X1 = ReplSep2\ (toset\ (\lambda X2 : \iota.m1\_subset\_1\ X2\ k7\_numbers))\ (\lambda X2 : \iota.toset\ (\lambda X3 : \iota.m1\_subset\_1\ X3\ k7\_numbers))\ (\lambda X2 : \iota.\lambda X3 : \iota.(X2 \in X0)\wedge(X3 \in X1))\ (\lambda X2 : \iota.\lambda X3 : \iota.k1\_xxreal\_3\ X2\ X3))) \tag{9}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow(\forall X1.(v1\_xxreal\_0\ X1)\Rightarrow(k16\_member\_1\ X0\ X1 = k8\_member\_1\ (k1\_tarski\ X1)\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.((v2\_membered\ X0)\wedge(v2\_membered\ X1))\Rightarrow(k8\_member\_1\ X0\ X1 = k8\_member\_1\ X1\ X0) \tag{11}$$

Theorem 1

$$\forall X0.(v2\_membered\ X0)\Rightarrow(\forall X1.(v2\_membered\ X1)\Rightarrow(\forall X2.\ (v1\_xxreal\_0\ X2)\Rightarrow(r1\_tarski\ (k6\_subset\_1\ (k16\_member\_1\ X0\ X2)\ (k16\_member\_1\ X1\ X2))\ (k16\_member\_1\ (k6\_subset\_1\ X0\ X1)\ X2))))$$