

t100_member_1 (TMdbwpLCPsvZ- ZgyxfW4FVLTnhrnxKQePgqX)

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Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k13_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (\forall X2. \\ & (v1_xcmplx_0 X2) \Rightarrow (k13_member_1 (k1_tarski X0) (k2_tarski X1 X2) = \\ & k2_tarski (k5_binop_2 X0 X1) (k5_binop_2 X0 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_membered X0) \Rightarrow (\forall X1.(v1_membered X1) \Rightarrow (\forall X2. \\ & (v1_membered X2) \Rightarrow (k13_member_1 X0 (k2_xboole_0 X1 X2) = k2_xboole_0 \\ & (k13_member_1 X0 X1) (k13_member_1 X0 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.k2_enumset1 X0 X1 \\ & X2 X3 = k2_xboole_0 (k2_tarski X0 X1) (k2_tarski X2 X3) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski X0 X1 = k2_xboole_0 (k1_tarski X0) (k1_tarski X1) \tag{4}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (v1_membered (k1_tarski X0)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_membered (k2_tarski X0 X1)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski X0 X1 = k2_tarski X1 X0 \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1_membered\ X0)\wedge(v1_membered\ X1))\Rightarrow(k13_member_1\ X0\ X1 = k13_member_1\ X1\ X0) \quad (8)$$

Theorem 1

$$\forall X0.(v1_xcmplx_0\ X0)\Rightarrow(\forall X1.(v1_xcmplx_0\ X1)\Rightarrow(\forall X2.(v1_xcmplx_0\ X2)\Rightarrow(\forall X3.(v1_xcmplx_0\ X3)\Rightarrow(k13_member_1(k2_tarski\ X0\ X1)\ (k2_tarski\ X2\ X3) = k2_enumset1\ (k5_binop_2\ X0\ X2)\ (k5_binop_2\ X0\ X3)\ (k5_binop_2\ X1\ X2)\ (k5_binop_2\ X1\ X3))))))$$