

t140_member_1
(TMVGLarn7ChyBfAxB4AMot998DCCCGhHmMCH)

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Let $v2_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k16_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_member_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v2_membered X0) \Rightarrow (\forall X1.(v2_membered X1) \Rightarrow (\forall X2. \\ & (v2_membered X2) \Rightarrow (k8_member_1 X0 (k2_xboole_0 X1 X2) = k2_xboole_0 \\ & (k8_member_1 X0 X1) (k8_member_1 X0 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v2_membered X0) \Rightarrow (\forall X1.(v2_membered X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (k16_member_1 (k6_subset_1 X0 X1) X2 = k6_subset_1 \\ & (k16_member_1 X0 X2) (k16_member_1 X1 X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.k6_subset_1 X0 X1 = k4_xboole_0 X0 X1 \tag{3}$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (v2_membered (k1_tarski X0)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v2_membered X0) \wedge (v2_membered X1)) \Rightarrow (v2_membered (k5_xboole_0 X0 X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(v2_membered X0) \Rightarrow (v2_membered (k4_xboole_0 X0 X1)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.k5_xboole_0 X0 X1 = k2_xboole_0 (k4_xboole_0 X0 X1) (k4_xboole_0 X1 X0) \tag{7}$$

Assume the following.

$$\forall X0.(v2_membered\ X0) \Rightarrow (\forall X1.(v1_xreal_0\ X1) \Rightarrow (k16_member_1\ X0\ X1 = k8_member_1\ (k1_tarski\ X1)\ X0)) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0) \Rightarrow (v1_xreal_0\ X0) \quad (9)$$

Theorem 1

$$\forall X0.(v2_membered\ X0) \Rightarrow (\forall X1.(v2_membered\ X1) \Rightarrow (\forall X2.(v1_xreal_0\ X2) \Rightarrow (k16_member_1\ (k5_xboole_0\ X0\ X1)\ X2 = k5_xboole_0\ (k16_member_1\ X0\ X2)\ (k16_member_1\ X1\ X2))))$$