

t6_member_1
(TMPiPUMzJboStgZgwkJas4xSLVN3vrtztmf)

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Let $v2_membered : \iota \Rightarrow o$ be given. Let $k4_member_1 : \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k2_xxreal_3 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_numbers : \iota$ be given. Let $k1_member_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((k2_xxreal_3 X1 \in X0) \Leftrightarrow (X1 \in k4_member_1 X0))) \quad (1)$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (k4_member_1 (k4_member_1 X0) = X0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (k2_xxreal_3 (k2_xxreal_3 X0) = X0) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(v2_membered X0) \Rightarrow (v2_membered (k3_xboole_0 X1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(v2_membered X0) \Rightarrow (v2_membered (k3_xboole_0 X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (v2_membered (k4_member_1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (v1_xxreal_0 (k2_xxreal_3 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \quad (8)$$

Assume the following.

$$\forall X0.(v2_membered\ X0) \Rightarrow (k4_member_1\ X0 = ReplSep\ (toset\ (\lambda X1 : \iota.m1_subset_1\ X1\ k7_numbers))\ (\lambda X1 : \iota.X1 \in X0)\ (\lambda X1 : \iota.k1_member_1\ X1)) \quad (9)$$

Assume the following.

$$\forall X0.(v2_membered\ X0) \Rightarrow (\forall X1.(v2_membered\ X1) \Rightarrow ((X0 = X1) \Leftrightarrow (\forall X2.(v1_xreal_0\ X2) \Rightarrow ((X2 \in X0) \Leftrightarrow (X2 \in X1)))))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0\ X0\ X1 = k3_xboole_0\ X1\ X0 \quad (11)$$

Theorem 1

$$\forall X0.(v2_membered\ X0) \Rightarrow (\forall X1.(v2_membered\ X1) \Rightarrow (k4_member_1\ (k3_xboole_0\ X0\ X1) = k3_xboole_0\ (k4_member_1\ X0)\ (k4_member_1\ X1)))$$