

t23_member_1

(TMFzq4L7a5PpczJ9yDeVR6NdCp5aqZt7Tmq)

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Let $v2_membered : \iota \Rightarrow o$ be given. Let $k6_member_1 : \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_numbers : \iota$ be given. Let $k2_member_1 : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. ((v2_membered X0) \wedge (v2_membered X1)) \Rightarrow (v2_membered (k2_xboole_0 X0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. (v2_membered X0) \Rightarrow (v2_membered (k6_member_1 X0)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (3)$$

Assume the following.

$$\forall X0. (v2_membered X0) \Rightarrow (k6_member_1 X0 = ReplSep (toset (\lambda X1 : \iota. m1_subset_1 X1 k7_numbers)) (\lambda X1 : \iota. X1 \in X0) (\lambda X1 : \iota. k2_member_1 X1))) \quad (4)$$

Assume the following.

$$\forall X0. (v2_membered X0) \Rightarrow (\forall X1. (v2_membered X1) \Rightarrow ((X0 = X1) \Leftrightarrow (\forall X2. (v1_xreal_0 X2) \Rightarrow ((X2 \in X0) \Leftrightarrow (X2 \in X1))))) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (6)$$

Theorem 1

$$\forall X0. (v2_membered X0) \Rightarrow (\forall X1. (v2_membered X1) \Rightarrow (k6_member_1 (k2_xboole_0 X0 X1) = k2_xboole_0 (k6_member_1 X0) (k6_member_1 X1)))$$