

t12_toprealb

(TMM9iTDLvKaB88LfjhrnLoURtFyJJVM12gs)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $k8_toprealb : \iota \Rightarrow \iota$ be given. Let $k12_euclid : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k7_toprealb : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_topreal9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $v5_rltopsp1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(v1_xreal_0 \\ & X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid X0))) \Rightarrow \\ & (u1_struct_0 (k7_toprealb X0 X2 X1) = k3_topreal9 X0 X2 X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(v1_xreal_0 \\ & X1) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k15_euclid X0))) \Rightarrow \\ & ((X2 \in k3_topreal9 X0 (k4_struct_0 (k15_euclid X0)) X1) \Rightarrow (k12_euclid \\ & X2 = X1)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (5)$$

Assume the following.

$$v6_membered\ k4_ordinal1 \quad (6)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0\ X0) \wedge (l1_struct_0\ X0)) \Rightarrow (\neg v1_xboole_0\ (u1_struct_0\ X0)) \quad (7)$$

Assume the following.

$$\forall X0.((\neg v1_xboole_0\ X0) \wedge (v7_ordinal1\ X0)) \Rightarrow (\neg v2_struct_0\ (k8_toprealb\ X0)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0) \Rightarrow (\forall X1.(m1_pre_topc\ X1\ X0) \Rightarrow (l1_pre_topc\ X1)) \quad (9)$$

Assume the following.

$$\forall X0.(l2_algstr_0\ X0) \Rightarrow ((l2_struct_0\ X0) \wedge (l1_algstr_0\ X0)) \quad (10)$$

Assume the following.

$$\forall X0.(l1_rlvect_1\ X0) \Rightarrow (l2_algstr_0\ X0) \quad (11)$$

Assume the following.

$$\forall X0.(l1_rltopsp1\ X0) \Rightarrow ((l1_rlvect_1\ X0) \wedge (l1_pre_topc\ X0)) \quad (12)$$

Assume the following.

$$\forall X0.(l1_pre_topc\ X0) \Rightarrow (l1_struct_0\ X0) \quad (13)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (m1_pre_topc\ (k8_toprealb\ X0)\ (k15_euclid\ X0)) \quad (14)$$

Assume the following.

$$\forall X0.(l2_struct_0\ X0) \Rightarrow (m1_subset_1\ (k4_struct_0\ X0)\ (u1_struct_0\ X0)) \quad (15)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow ((v5_rltopsp1\ (k15_euclid\ X0)) \wedge (l1_rltopsp1\ (k15_euclid\ X0))) \quad (16)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (k8_toprealb\ X0 = k7_toprealb\ X0\ (k4_struct_0\ (k15_euclid\ X0))\ np_1) \quad (17)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers) \Rightarrow (v1_xreal_0\ X0) \quad (18)$$

Assume the following.

$$\forall X0.(v6_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow (v7_ordinal1\ X1)) \quad (19)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0\ X0) \wedge (m1_subset_1\ X0\ k5_numbers)) \Rightarrow \\ & (\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ (k15_euclid\ X0))) \Rightarrow (\\ & (m1_subset_1\ X1\ (u1_struct_0\ (k8_toprealb\ X0))) \Rightarrow (k12_euclid \\ & X1 = np_1))) \end{aligned}$$