

l21_topreal2

(TMK9JFvhEdcznga7treCEUcVkJAuK3ij7Cp4)

October 27, 2020

Let $k19_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k1_rltopsp1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $np_1 : \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $c3_xreal_0 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v5_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $c2_binop_2 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (X1 \in k1_rltopsp1 \\ & X0 X1 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$np_2 \in k4_ordinal1 \quad (2)$$

Assume the following.

$$m1_subset_1 k6_numbers k1_numbers \quad (3)$$

Assume the following.

$$c3_xreal_0 = np_1 \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow & ((v2_pre_topc\ (k15_euclid\ X0)) \wedge \\ & ((v13_algstr_0\ (k15_euclid\ X0)) \wedge ((v2_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & ((v3_rlvect_1\ (k15_euclid\ X0)) \wedge ((v4_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & ((v5_rlvect_1\ (k15_euclid\ X0)) \wedge ((v6_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & ((v7_rlvect_1\ (k15_euclid\ X0)) \wedge ((v8_rlvect_1\ (k15_euclid\ X0)) \wedge \\ & (v5_rltopsp1\ (k15_euclid\ X0)))))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow ((-v2_struct_0\ (k15_euclid\ X0)) \wedge (v5_rltopsp1\ (k15_euclid\ X0))) \quad (6)$$

Assume the following.

$$\forall X0.(l1_rltopsp1\ X0) \Rightarrow ((l1_rlvect_1\ X0) \wedge (l1_pre_topc\ X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0\ X0) \wedge (v1_xreal_0\ X1)) \Rightarrow (m1_subset_1\ (k19_euclid\ X0\ X1)\ (u1_struct_0\ (k15_euclid\ np_2))) \quad (8)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow ((v5_rltopsp1\ (k15_euclid\ X0)) \wedge (l1_rltopsp1\ (k15_euclid\ X0))) \quad (9)$$

Assume the following.

$$m1_subset_1\ c3_xreal_0\ k1_numbers \quad (10)$$

Assume the following.

$$c2_binop_2 = k6_numbers \quad (11)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Leftrightarrow (X0 \in k4_ordinal1) \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers) \Rightarrow (v1_xreal_0\ X0) \quad (13)$$

Theorem 1

$$\begin{aligned} & k19_euclid\ k6_numbers\ k6_numbers \in k1_rltopsp1\ (k15_euclid\ np_2) \\ & (k19_euclid\ k6_numbers\ k6_numbers)\ (k19_euclid\ np_1\ k6_numbers) \end{aligned}$$