

t34_toprns_1

(TMQWQ3Q98mtb1vxmdd1iyLKdtn6Z6dw4ey8)

October 27, 2020

Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_euclid : \iota \Rightarrow \iota$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v5_rltopsp1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
 & \quad (k15_euclid X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (\\
 & \quad k15_euclid X0))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k15_euclid \\
 & \quad X0))) \Rightarrow (k5_algstr_0 (k15_euclid X0) X1 (k5_algstr_0 (k15_euclid \\
 & \quad X0) X2 X3) = k3_rlvect_1 (k15_euclid X0) (k5_algstr_0 (k15_euclid \\
 & \quad X0) X1 X2) X3)))) \tag{1}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
 & \quad (k15_euclid X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (\\
 & \quad k15_euclid X0))) \Rightarrow (k5_algstr_0 (k15_euclid X0) X1 X2 = k3_rlvect_1 \\
 & \quad (k15_euclid X0) X1 (k4_algstr_0 (k15_euclid X0) X2)))) \tag{2}
 \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 (k15_euclid X0))) \Rightarrow (\forall X2.(\\ & m1_subset_1 X2 (u1_struct_0 (k15_euclid X0))) \Rightarrow (r1_xxreal_0 (\\ & k12_euclid (k3_rlvect_1 (k15_euclid X0) X1 X2)) (k7_real_1 (k12_euclid \\ & X1) (k12_euclid X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\ & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((k5_algstr_0 \\ & X0 (k3_rlvect_1 X0 X1 X2) X1 = X2) \wedge ((k5_algstr_0 X0 (k3_rlvect_1 \\ & X0 X2 X1) X1 = X2) \wedge ((k3_rlvect_1 X0 (k5_algstr_0 X0 X1 X1) X2 = X2) \wedge \\ & ((k3_rlvect_1 X0 (k5_algstr_0 X0 X2 X1) X1 = X2) \wedge ((k3_rlvect_1 X0 \\ & X1 (k5_algstr_0 X0 X2 X1) = X2) \wedge ((k3_rlvect_1 X0 X2 (k5_algstr_0 \\ & X0 X1 X1) = X2) \wedge (k5_algstr_0 X0 X1 (k5_algstr_0 X0 X1 X2) = X2)))))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0))) \Rightarrow (\forall X2.(m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$(\neg v1_xboole_0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow ((v2_pre_topc (k15_euclid X0)) \wedge \\ & ((v13_algstr_0 (k15_euclid X0)) \wedge ((v2_rlvect_1 (k15_euclid X0)) \wedge \\ & ((v3_rlvect_1 (k15_euclid X0)) \wedge ((v4_rlvect_1 (k15_euclid X0)) \wedge \\ & ((v5_rlvect_1 (k15_euclid X0)) \wedge ((v6_rlvect_1 (k15_euclid X0)) \wedge \\ & ((v7_rlvect_1 (k15_euclid X0)) \wedge ((v8_rlvect_1 (k15_euclid X0)) \wedge \\ & (v5_rltopsp1 (k15_euclid X0)))))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow ((\neg v2_struct_0 (k15_euclid X0)) \wedge \\ & (v5_rltopsp1 (k15_euclid X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (10)$$

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.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((l2_algstr_0 \ X0) \wedge ((m1_subset_1 \\ & X1 \ (u1_struct_0 \ X0)) \wedge (m1_subset_1 \ X2 \ (u1_struct_0 \ X0)))) \Rightarrow (m1_subset_1 \\ & (k5_algstr_0 \ X0 \ X1 \ X2) \ (u1_struct_0 \ X0)) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(v7_ordinal1 \ X0) \Rightarrow ((v5_rltopsp1 \ (k15_euclid \ X0)) \wedge (l1_rltopsp1 \ (k15_euclid \ X0))) \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m2_subset_1 \ X0 \ k1_numbers \ k5_numbers) \Rightarrow (\forall X1. \\ & (m1_subset_1 \ X1 \ (u1_struct_0 \ (k15_euclid \ X0))) \Rightarrow (\forall X2.(\\ & m1_subset_1 \ X2 \ (u1_struct_0 \ (k15_euclid \ X0))) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 \ (u1_struct_0 \ (k15_euclid \ X0))) \Rightarrow (r1_xxreal_0 \ (k12_euclid \ (\\ & k5_algstr_0 \ (k15_euclid \ X0) \ X1 \ X2)) \ (k7_real_1 \ (k12_euclid \ (k5_algstr_0 \\ & (k15_euclid \ X0) \ X1 \ X3)) \ (k12_euclid \ (k5_algstr_0 \ (k15_euclid \ X0) \\ & X3 \ X2)))))) \end{aligned}$$