

l3_topreal2

(TMb2PVa59M1h7WgGox2zFzCYVB4fYLzrZoN)

October 27, 2020

Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_rltopsp1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_euclid : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ 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 $v5_rltopsp1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.k3_xboole_0 X0 \ k1_xboole_0 = k1_xboole_0 \quad (2)$$

Assume the following.

$$\begin{aligned} & r1_subset_1 (k1_rltopsp1 (k15_euclid np_2) (k19_euclid k6_numbers \\ & k6_numbers) (k19_euclid k6_numbers np_1)) (k1_rltopsp1 (k15_euclid \\ & np_2) (k19_euclid np_1 k6_numbers) (k19_euclid np_1 np_1)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 \ X0) \wedge (\neg v1_xboole_0 \ X1)) \Rightarrow \\ & ((r1_subset_1 \ X0 \ X1) \Leftrightarrow (r1_xboole_0 \ X0 \ X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1_subset_1 \ X2 \ (k1_zfmisc_1 \\ & X0)) \Rightarrow (k9_subset_1 \ X0 \ X1 \ X2 = k3_xboole_0 \ X1 \ X2) \end{aligned} \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (9)$$

Assume the following.

$$\begin{aligned} & \exists X0. (v1_xboole_0 \ X0) \wedge ((v1_xcmplx_0 \ X0) \wedge ((v1_xreal_0 \\ & X0) \wedge (v1_xreal_0 \ X0))) \end{aligned} \quad (10)$$

Assume the following.

$$v6_membered \ k4_ordinal1 \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v7_ordinal1 \ X0) \Rightarrow ((v2_pre_topc \ (k15_euclid \ X0)) \wedge \\ & ((v13_algstr_0 \ (k15_euclid \ X0)) \wedge ((v2_rlvect_1 \ (k15_euclid \ X0)) \wedge \\ & ((v3_rlvect_1 \ (k15_euclid \ X0)) \wedge ((v4_rlvect_1 \ (k15_euclid \ X0)) \wedge \\ & ((v5_rlvect_1 \ (k15_euclid \ X0)) \wedge ((v6_rlvect_1 \ (k15_euclid \ X0)) \wedge \\ & ((v7_rlvect_1 \ (k15_euclid \ X0)) \wedge ((v8_rlvect_1 \ (k15_euclid \ X0)) \wedge \\ & (v5_rltopsp1 \ (k15_euclid \ X0)))))))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v7_ordinal1 \ X0) \Rightarrow ((\neg v2_struct_0 \ (k15_euclid \ X0)) \wedge \\ & (v5_rltopsp1 \ (k15_euclid \ X0))) \end{aligned} \quad (13)$$

Assume the following.

$$v3_membered \ k1_numbers \quad (14)$$

Assume the following.

$$\forall X0.(l1_rltopsp1 X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l1_pre_topc X0)) \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 \\ X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\ ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\ X0) \wedge (l1_rlvect_1 X0)))))))))) \wedge ((m1_subset_1 X1 (u1_struct_0 \\ X0)) \wedge (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (m1_subset_1 (k1_rltopsp1 \\ X0 X1 X2) (k1_zfmisc_1 (u1_struct_0 X0))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 \\ (k19_euclid X0 X1) (u1_struct_0 (k15_euclid np_2))) \quad (17)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((v5_rltopsp1 (k15_euclid X0)) \wedge \\ (l1_rltopsp1 (k15_euclid X0))) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.(r1_xboole_0 X0 X1) \Leftrightarrow (k3_xboole_0 X0 X1 = \\ k1_xboole_0) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (20)$$

Assume the following.

$$\forall X0.(v6_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\ (v7_ordinal1 X1)) \quad (21)$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\ (v1_xreal_0 X1)) \quad (22)$$

Theorem 1

$$\begin{aligned} k9_subset_1 (u1_struct_0 (k15_euclid np_2)) (k1_rltopsp1 (k15_euclid \\ np_2) (k19_euclid k6_numbers k6_numbers) (k19_euclid k6_numbers \\ np_1)) (k1_rltopsp1 (k15_euclid np_2) (k19_euclid np_1 k6_numbers) \\ (k19_euclid np_1 np_1)) = k1_xboole_0 \end{aligned}$$