

t29_topreal1

(TMd4rdDU5d6ACypDMC82GCY5KZhSBBG3Hwn)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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 $v5_topreal1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_topmetr : \iota$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_topreal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k4_ordinal1 : \iota$ 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 $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & np_2)))) \Rightarrow (\neg(v5_topreal1 X0) \wedge (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & (k15_euclid np_2)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & (k15_euclid np_2)))) \Rightarrow (\neg r1_topreal1 (k15_euclid np_2) X1 X2 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (3)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (4)$$

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.

$$\forall X0.(l1_rltopsp1\ X0) \Rightarrow ((l1_rlvect_1\ X0) \wedge (l1_pre_topc\ X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow ((v5_rltopsp1\ (k15_euclid\ X0)) \wedge (l1_rltopsp1\ (k15_euclid\ X0))) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \Rightarrow & (\forall X1. \\ & (m1_subset_1\ X1\ (u1_struct_0\ X0)) \Rightarrow (\forall X2.(m1_subset_1\ X2 \\ & (u1_struct_0\ X0)) \Rightarrow (\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1\ (\\ & u1_struct_0\ X0))) \Rightarrow ((r1_topreal1\ X0\ X1\ X2\ X3) \Leftrightarrow (\exists X4.((v1_funct_1 \\ & X4) \wedge ((v1_funct_2\ X4\ (u1_struct_0\ k5_topmetr)\ (u1_struct_0\ (k1_pre_topc \\ & X0\ X3))) \wedge (m1_subset_1\ X4\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0 \\ & k5_topmetr)\ (u1_struct_0\ (k1_pre_topc\ X0\ X3)))))) \wedge ((v3_tops_2 \\ & X4\ k5_topmetr\ (k1_pre_topc\ X0\ X3)) \wedge ((k1_funct_1\ X4\ k6_numbers = \\ & X1) \wedge (k1_funct_1\ X4\ np_1 = X2))))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(v6_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow (v7_ordinal1\ X1)) \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid \\ & np_2)))) \Rightarrow (\neg(v5_topreal1\ X0) \wedge (\forall X1.((v1_funct_1\ X1) \wedge \\ & ((v1_funct_2\ X1\ (u1_struct_0\ k5_topmetr)\ (u1_struct_0\ (k1_pre_topc \\ & (k15_euclid\ np_2)\ X0))) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & (u1_struct_0\ k5_topmetr)\ (u1_struct_0\ (k1_pre_topc\ (k15_euclid \\ & np_2)\ X0)))))) \Rightarrow (\neg v3_tops_2\ X1\ k5_topmetr\ (k1_pre_topc\ (k15_euclid \\ & np_2)\ X0)))) \end{aligned}$$