

t26_kurato_2 (TM-
SKD6EPHTF4RfNua5R8HhQBZDWd3LKDFVT)

October 27, 2020

Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k9_setfam_1 : \iota \Rightarrow \iota$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v9_rltopsp1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_kurato_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ 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 $k4_ordinal1 : \iota$ 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 $l1_pre_topc : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ np_2)))) \Rightarrow (((v9_rltopsp1 X0 (k15_euclid np_2)) \wedge (v4_pre_topc \\ X0 (k15_euclid np_2))) \Rightarrow (v2_compts_1 X0 (k15_euclid np_2))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.((v1_funct_1 \\ X1) \wedge ((v1_funct_2 X1 k5_numbers (k9_setfam_1 (u1_struct_0 (k15_euclid \\ X0)))) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ (k9_setfam_1 (u1_struct_0 (k15_euclid X0)))))))) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k15_euclid X0)))) \Rightarrow \\ (((v9_rltopsp1 X2 (k15_euclid X0)) \wedge (\forall X3.(m1_subset_1 \\ X3 k5_numbers) \Rightarrow (r1_tarski (k3_funct_2 k5_numbers (k9_setfam_1 \\ (u1_struct_0 (k15_euclid X0))) X1 X3) X2))) \Rightarrow (v9_rltopsp1 (k1_kurato_2 \\ (k15_euclid X0) X1) (k15_euclid X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_2) \wedge (m2_subset_1 \ np_2 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_2 \ k5_numbers) \wedge (m1_subset_1 \ np_2 \ k1_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. k9_setfam_1 \ X0 = k1_zfmisc_1 \ X0 \quad (4)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. (v7_ordinal1 \ X0) \Rightarrow ((v2_pre_topc \ (k15_euclid \ X0)) \wedge \\ & ((v13_algstr_0 \ (k15_euclid \ X0)) \wedge ((v2_rlvect_1 \ (k15_euclid \ X0)) \wedge \\ & ((v3_rlvect_1 \ (k15_euclid \ X0)) \wedge ((v4_rlvect_1 \ (k15_euclid \ X0)) \wedge \\ & ((v5_rlvect_1 \ (k15_euclid \ X0)) \wedge ((v6_rlvect_1 \ (k15_euclid \ X0)) \wedge \\ & ((v7_rlvect_1 \ (k15_euclid \ X0)) \wedge ((v8_rlvect_1 \ (k15_euclid \ X0)) \wedge \\ & (v5_rltopsp1 \ (k15_euclid \ X0)))))))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0. (v7_ordinal1 \ X0) \Rightarrow ((\neg v2_struct_0 \ (k15_euclid \ X0)) \wedge (v5_rltopsp1 \ (k15_euclid \ X0))) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 \ X0) \wedge ((v2_pre_topc \ X0) \wedge \\ & (l1_pre_topc \ X0))) \wedge ((v1_funct_1 \ X1) \wedge ((v1_funct_2 \ X1 \ k5_numbers \\ & (k9_setfam_1 \ (u1_struct_0 \ X0))) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \\ & (k2_zfmisc_1 \ k5_numbers \ (k9_setfam_1 \ (u1_struct_0 \ X0))))))) \Rightarrow \\ & (v4_pre_topc \ (k1_kurato_2 \ X0 \ X1) \ X0) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. (l1_rltopsp1 \ X0) \Rightarrow ((l1_rlvect_1 \ X0) \wedge (l1_pre_topc \ X0)) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 \ X0) \wedge ((v2_pre_topc \ X0) \wedge \\ & (l1_pre_topc \ X0))) \wedge ((v1_funct_1 \ X1) \wedge ((v1_funct_2 \ X1 \ k5_numbers \\ & (k9_setfam_1 \ (u1_struct_0 \ X0))) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \\ & (k2_zfmisc_1 \ k5_numbers \ (k9_setfam_1 \ (u1_struct_0 \ X0))))))) \Rightarrow \\ & (m1_subset_1 \ (k1_kurato_2 \ X0 \ X1) \ (k1_zfmisc_1 \ (u1_struct_0 \ X0))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0. (v7_ordinal1 \ X0) \Rightarrow ((v5_rltopsp1 \ (k15_euclid \ X0)) \wedge (l1_rltopsp1 \ (k15_euclid \ X0))) \quad (11)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k4_ordinal1) \Rightarrow (v7_ordinal1 \ X0) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers (k9_setfam_1 \\ & (u1_struct_0 (k15_euclid np_2)))) \wedge (m1_subset_1 X0 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k5_numbers (k9_setfam_1 (u1_struct_0 (k15_euclid \\ & np_2)))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & (k15_euclid np_2)))) \Rightarrow ((v9_rltopsp1 X1 (k15_euclid np_2)) \wedge \\ & (\forall X2.(m1_subset_1 X2 k5_numbers) \Rightarrow (r1_tarski (k3_funct_2 \\ & k5_numbers (k9_setfam_1 (u1_struct_0 (k15_euclid np_2))) X0 \\ & X2) X1))) \Rightarrow (v2_compts_1 (k1_kurato_2 (k15_euclid np_2) X0) (k15_euclid \\ & np_2)))) \end{aligned}$$