

t21_urysohn3

(TMJJ7pY2GMgB6M38LdHiBgdekMjNfRmGtQS)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v8_pre_topc : \iota \Rightarrow o$ be given. Let $v1_compts_1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. 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 $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k3_topmetr : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v10_pre_topc : \iota \Rightarrow o$ be given. Let $v9_pre_topc : \iota \Rightarrow o$ be given. Let $v6_waybel_3 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v10_pre_topc X0) \wedge (l1_pre_topc X0)))) \Rightarrow (\forall X1. ((v4_pre_topc X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2. ((v4_pre_topc X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\neg (r1_xboole_0 X1 X2) \wedge (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow (\neg (v5_pre_topc X3 X0 k3_topmetr) \wedge (\forall X4. (m1_subset_1 X4 (u1_struct_0 X0) \Rightarrow ((r1_xxreal_0 k6_numbers (k1_seq_1 X3 X4)) \wedge ((r1_xxreal_0 (k1_seq_1 X3 X4) np_1) \wedge ((X4 \in X1) \Rightarrow (k1_seq_1 X3 X4 = k6_numbers)) \wedge ((X4 \in X2) \Rightarrow (k1_seq_1 X3 X4 = np_1)))))))))) \Rightarrow (2) \end{aligned}$$

Assume the following.

$$\forall X0. (l1_pre_topc X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v8_pre_topc X0) \wedge (v1_compts_1 X0)))) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v9_pre_topc X0) \wedge ((v10_pre_topc X0) \wedge (v6_waybel_3 X0)))))) \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge ((v8_pre_topc \\ & X0) \wedge ((v1_compts_1 X0) \wedge (l1_pre_topc X0)))))) \Rightarrow (\forall X1.((v4_pre_topc \\ & X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2. \\ & ((v4_pre_topc X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))) \Rightarrow (\neg(r1_xboole_0 X1 X2) \wedge (\forall X3.((v1_funct_1 X3) \wedge (\\ & (v1_funct_2 X3 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 k3_topmetr)))))) \Rightarrow \\ & (\neg(v5_pre_topc X3 X0 k3_topmetr) \wedge (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X0) \Rightarrow ((r1_xxreal_0 k6_numbers (k1_seq_1 X3 X4)) \wedge \\ & ((r1_xxreal_0 (k1_seq_1 X3 X4) np_1) \wedge (((X4 \in X1) \Rightarrow (k1_seq_1 X3 \\ & X4 = k6_numbers)) \wedge ((X4 \in X2) \Rightarrow (k1_seq_1 X3 X4 = np_1)))))))))) \end{aligned}$$