

t23_urysohn1

(TMKVVDqsx7eXBe4r1eENZXjc3jncMyzdHZ9U)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v10_pre_topc : \iota \Rightarrow o$ 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 $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (k2_pre_topc X0 (k2_struct_0 X0) = k2_struct_0 X0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow ((v10_pre_topc X0) \Leftrightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\neg(X1 \neq k1_xboole_0) \wedge ((X2 \neq k2_struct_0 X0) \wedge ((r1_tarski X1 X2) \wedge ((v4_pre_topc X1 X0) \wedge ((v3_pre_topc X2 X0) \wedge (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\neg(v3_pre_topc X3 X0) \wedge ((r1_tarski X1 X3) \wedge (r1_tarski (k2_pre_topc X0 X3) X2)))))))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1_tarski X0 X1) \wedge (r1_tarski X1 X0)) \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow ((v10_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\neg(v3_pre_topc X1 X0) \wedge ((v4_pre_topc X2 X0) \wedge ((X2 \neq k1_xboole_0) \wedge ((r1_tarski X2 X1) \wedge (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\neg(v3_pre_topc X3 X0) \wedge ((r1_tarski X2 X3) \wedge (r1_tarski (k2_pre_topc X0 X3) X1)))))))))))))) \end{aligned}$$