

t3_urysohn3

(TMF9sTGw6NDu9xz9TwLyMPAGTP8rsQocoZh)

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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 $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc.1 : \iota \Rightarrow \iota$ be given. Let $u1_struct.0 : \iota \Rightarrow \iota$ be given. Let $m2_subset.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_urysohn3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_urysohn1 : \iota$ be given. Let $k9_setfam.1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct.1 : \iota \Rightarrow o$ be given. Let $k1_urysohn1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole.0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(m1_subset.1 X4 (k1_zfmisc.1 (k2_zfmisc.1 X0 X2))) \Rightarrow (((r1_tarski X0 X1) \wedge (r1_tarski X2 X3)) \Rightarrow (m1_subset.1 X4 (k1_zfmisc.1 (k2_zfmisc.1 X1 X3)))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_funct.1 X2) \wedge (m1_subset.1 X2 (k1_zfmisc.1 (k2_zfmisc.1 X0 X1)))) \Rightarrow (X2 \in k4_partfun1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.(m1_subset.1 X0 k5_numbers) \Rightarrow (r1_tarski (k1_urysohn1 X0) k2_urysohn1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset.1 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski X0 X0 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole.0 X0) \wedge ((\neg v1_xboole.0 X1) \wedge (m1_subset.1 X1 (k1_zfmisc.1 X0)))) \Rightarrow (\forall X2.(m2_subset.1 X2 X0 X1) \Leftrightarrow (m1_subset.1 X2 X1)) \quad (6)$$

Assume the following.

$$\forall X0.k9_setfam.1 X0 = k1_zfmisc.1 X0 \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$(\neg v1_xboole.0 k4_ordinal1) \wedge (v3_ordinal1 k4_ordinal1) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2_struct.0 \\ & X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \wedge ((m1_subset.1 X1 (\\ & k1_zfmisc.1 (u1_struct.0 X0))) \wedge ((m1_subset.1 X2 (k1_zfmisc.1 \\ & (u1_struct.0 X0))) \wedge (m1_subset.1 X3 k5_numbers)))) \Rightarrow (\forall X4. \\ & (m1_urysohn3 X4 X0 X1 X2 X3) \Rightarrow ((v1_funct.1 X4) \wedge ((v1_funct.2 X4 (\\ & k1_urysohn1 X3) (k9_setfam.1 (u1_struct.0 X0))) \wedge (m1_subset.1 \\ & X4 (k1_zfmisc.1 (k2_zfmisc.1 (k1_urysohn1 X3) (k9_setfam.1 (u1_struct.0 \\ & X0)))))))))) \end{aligned} \quad (10)$$

Assume the following.

$$m1_subset.1 k5_numbers (k1_zfmisc.1 k1_numbers) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xboole.0 X0) \Rightarrow (\forall X1.(m1_subset.1 X1 (k1_zfmisc.1 X0)) \Rightarrow (v1_xboole.0 X1)) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.(((\neg v2_struct.0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.(m1_subset.1 X1 (k1_zfmisc.1 (u1_struct.0 \\ & X0))) \Rightarrow (\forall X2.(m1_subset.1 X2 (k1_zfmisc.1 (u1_struct.0 \\ & X0))) \Rightarrow (\forall X3.(m2_subset.1 X3 k1_numbers k5_numbers) \Rightarrow (\forall X4. \\ & (m1_urysohn3 X4 X0 X1 X2 X3) \Rightarrow (m1_subset.1 X4 (k4_partfun1 k2_urysohn1 \\ & (k9_setfam.1 (u1_struct.0 X0)))))))))) \end{aligned}$$