

l79_tex_2

(TMYjAQtWYya1H8d21mVtFJFyTU3o8ieFq1br)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v3_tdlat_3 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v4_tex_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $v1_tdlat_3 : \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (((v4_pre_topc X1 X0) \wedge (r1_tarski X2 X1)) \Rightarrow \\ (r1_tarski (k2_pre_topc X0 X2) X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X3) \wedge \\ ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X1)))) \Rightarrow ((X1 \neq k1_xboole_0) \Rightarrow (\forall X4.(X4 \in k8_relset_1 X0 \\ X1 X3 X2) \Leftrightarrow ((X4 \in X0) \wedge (k1_funct_1 X3 X4 \in X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski (k1_tarski X0) X1) \Leftrightarrow (X0 \in X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1)\Rightarrow((v1_xboole_0 X1)\vee (X0 \in X1)) \quad (5)$$

Assume the following.

$$\forall X0.((v2_pre_topc X0)\wedge(l1_pre_topc X0))\Rightarrow((v1_tdlat_3 X0)\Leftrightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow (v4_pre_topc X1 X0))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski X0 X0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow (k6_domain_1 X0 X1 = k1_tarski X1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge (((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0)))\Rightarrow(k3_funct_2 X0 X1 X2 X3 = k1_funct_1 X2 X3) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u1_struct_0 X0)) \quad (10)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (11)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(\forall X1.(m1_pre_topc X1 X0)\Rightarrow (l1_pre_topc X1)) \quad (12)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(l1_struct_0 X0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(m1_subset_1 (k8_relset_1 X0 X1 X2 X3) (k1_zfmisc_1 X0)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(m1_subset_1 X1 X0))\Rightarrow (m1_subset_1 (k6_domain_1 X0 X1) (k1_zfmisc_1 X0)) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_pre_topc X0)\Rightarrow(\forall X1.(l1_pre_topc X1)\Rightarrow(\forall X2. \\ & ((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\ & X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X1))))))\Rightarrow((v5_pre_topc X2 X0 X1)\Leftrightarrow(\forall X3. \\ & (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X1)))\Rightarrow((v4_pre_topc \\ & X3 X1)\Rightarrow(v4_pre_topc (k8_relset_1 (u1_struct_0 X0) (u1_struct_0 \\ & X1) X2 X3) X0)))))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge(l1_pre_topc \\ & X0)))\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge(m1_pre_topc X1 X0))\Rightarrow(\\ & \forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) \\ & (u1_struct_0 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow((v3_borsuk_1 X2 X0 X1)\Leftrightarrow \\ & (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow((X3 \in u1_struct_0 \\ & X1)\Rightarrow(k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X1) X2 X3 = X3)))))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_pre_topc X0))\Rightarrow(\forall X1. (m1_pre_topc X1 X0)\Rightarrow(((\neg v2_struct_0 X1)\wedge(\neg v1_tdlat_3 X1))\Rightarrow((\neg v2_struct_0 X1)\wedge(\neg v4_tex_2 X1 X0)))) \quad (18)$$

Assume the following.

$$\forall X0.((v2_pre_topc X0)\wedge(l1_pre_topc X0))\Rightarrow(\forall X1. (m1_pre_topc X1 X0)\Rightarrow(v2_pre_topc X1)) \quad (19)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge((v3_tdlat_3 \\ & X0)\wedge(l1_pre_topc X0))))\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge((v4_tex_2 \\ & X1 X0)\wedge(m1_pre_topc X1 X0)))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((\\ & v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge((v5_pre_topc \\ & X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X1))))))\Rightarrow((v3_borsuk_1 X2 X0 X1)\Rightarrow(\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X1))\Rightarrow(\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X0))\Rightarrow((X3 = X4)\Rightarrow(r1_tarski (k2_pre_topc X0 (k6_domain_1 \\ & (u1_struct_0 X0) X4) (k8_relset_1 (u1_struct_0 X0) (u1_struct_0 \\ & X1) X2 (k6_domain_1 (u1_struct_0 X1) X3)))))))))) \end{aligned}$$