

l71_toprealb
(TMbTWocyfec15Phyx9mzkUtoPR1D28ED4v9)

October 27, 2020

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 $k2_topalg_2 : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_toprealb : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k12_toprealb : \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k3_topmetr : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(l1_pre_topc X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (u1_struct_0 (k1_pre_topc X0 X1) = X1)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1) \Rightarrow ((r1_tarski X0 (k9_xtuple_0 X1)) \Rightarrow (k9_xtuple_0 (k5_relat_1 X1 X0) = X0)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_tarski (k10_xtuple_0 X1) X0) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k9_xtuple_0 X1) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k9_xtuple_0 X1) X0)))))) \quad (4)$$

Assume the following.

$$u1_struct_0 k3_topmetr = k1_numbers \quad (5)$$

Assume the following.

$$k2_topalg_2 = k3_topmetr \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(\quad (7)$$

$$k2_relset_1 X0 X1 = k10_xtuple_0 X1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge \quad (8)$$

$$(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(k2_partfun1$$

$$X0 X1 X2 X3 = k5_relat_1 X2 X3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(\quad (9)$$

$$k1_relset_1 X0 X1 = k9_xtuple_0 X1)$$

Assume the following.

$$k1_relset_1 (u1_struct_0 k2_topalg_2) k12_toprealb = k1_numbers \quad (10)$$

Assume the following.

$$(v2_pre_topc k3_topmetr)\wedge(l1_pre_topc k3_topmetr) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(\quad (12)$$

$$m1_subset_1 (k2_relset_1 X0 X1) (k1_zfmisc_1 X0))$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge \quad (13)$$

$$(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((v1_funct_1$$

$$(k2_partfun1 X0 X1 X2 X3))\wedge(m1_subset_1 (k2_partfun1 X0 X1 X2 X3)$$

$$(k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))$$

Assume the following.

$$(v1_funct_1 k12_toprealb)\wedge((v1_funct_2 k12_toprealb (u1_struct_0 \quad (14)$$

$$k2_topalg_2) (u1_struct_0 (k8_toprealb np_2)))\wedge(m1_subset_1$$

$$k12_toprealb (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 k2_topalg_2)$$

$$(u1_struct_0 (k8_toprealb np_2))))))$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \quad (15)$$

$$(k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1))$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \quad (16)$$

$$(k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 k2_topalg_2))) \Rightarrow \\ & ((v1_funct_1 (k2_partfun1 (u1_struct_0 k2_topalg_2) (u1_struct_0 \\ & (k8_toprealb np_2)) k12_toprealb X0)) \wedge ((v1_funct_2 (k2_partfun1 \\ & (u1_struct_0 k2_topalg_2) (u1_struct_0 (k8_toprealb np_2)) \\ & k12_toprealb X0) (u1_struct_0 (k1_pre_topc k2_topalg_2 X0)) (\\ & u1_struct_0 (k8_toprealb np_2))) \wedge (m1_subset_1 (k2_partfun1 \\ & (u1_struct_0 k2_topalg_2) (u1_struct_0 (k8_toprealb np_2)) \\ & k12_toprealb X0) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k1_pre_topc \\ & k2_topalg_2 X0)) (u1_struct_0 (k8_toprealb np_2)))))) \end{aligned}$$