

t51_group_9
(TMSsLotTt2Dx3ui51PSSfTf9xBjo9ZgxiHS)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_group_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_group_9 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_group_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_group_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $v2_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k14_group_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_group_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge \\ & (v3_group_1 X1) \wedge ((v3_group_9 X1 X0) \wedge (l1_group_9 X1 X0)))) \Rightarrow (\\ & \quad \forall X2. ((\neg v2_struct_0 X2) \wedge ((v2_group_1 X2) \wedge ((v3_group_1 \\ & \quad X2) \wedge ((v3_group_9 X2 X0) \wedge (l1_group_9 X2 X0)))))) \Rightarrow (\forall X3. (\\ & \quad (v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X1) (u1_struct_0 \\ & \quad X2)) \wedge ((v1_group_6 X3 X1 X2) \wedge ((v7_group_9 X3 X0 X1 X2) \wedge (m1_subset_1 \\ & \quad X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X2))))))) \Rightarrow \\ & \quad (k2_relset_1 (u1_struct_0 X2) X3 = u1_struct_0 (k14_group_9 X0 \\ & \quad X1 X2 X3)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge ((v2_group_1 X1) \wedge \\ & (v3_group_1 X1) \wedge ((v3_group_9 X1 X0) \wedge (l1_group_9 X1 X0)))) \Rightarrow (\\ & \quad \forall X2. ((v2_group_9 X2 X0) \wedge (m1_group_9 X2 X0 X1)) \Rightarrow (\forall X3. \\ & \quad ((v2_group_9 X3 X0) \wedge (m1_group_9 X3 X0 X1)) \Rightarrow ((u1_struct_0 X2 = u1_struct_0 \\ & \quad X3) \Rightarrow (X2 = X3)))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2_struct_0 X1)\wedge((v2_group_1 X1)\wedge(v3_group_1 X1)\wedge((v3_group_9 X1 X0)\wedge(l1_group_9 X1 X0))))\Rightarrow(m1_group_9 X1 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2_struct_0 X1)\wedge((v2_group_1 X1)\wedge((v3_group_1 X1)\wedge((v3_group_9 X1 X0)\wedge(l1_group_9 X1 X0))))\wedge(((\neg v2_struct_0 X2)\wedge((v2_group_1 X2)\wedge((v3_group_1 X2)\wedge((v3_group_9 X2 X0)\wedge(l1_group_9 X2 X0))))\wedge((v1_funct_1 X3)\wedge((v1_funct_2 X3 (u1_struct_0 X1) (u1_struct_0 X2))\wedge((v1_group_6 X3 X1 X2)\wedge((v7_group_9 X3 X0 X1 X2)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X2))))))))))\Rightarrow((v2_group_9 (k14_group_9 X0 X1 X2 X3) X0)\wedge(m1_group_9 (k14_group_9 X0 X1 X2 X3) X0 X2)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow((v2_funct_2 X1 X0)\Leftrightarrow(k2_relset_1 X0 X1 = X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1)\Rightarrow((v5_relat_1 X1 X0)\Leftrightarrow(r1_tarski (k10_xtuple_0 X1) X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (8)$$

Theorem 1

$$\forall X0.\forall X1.(((\neg v2_struct_0 X1)\wedge((v2_group_1 X1)\wedge(v3_group_1 X1)\wedge((v3_group_9 X1 X0)\wedge(l1_group_9 X1 X0))))\Rightarrow(\forall X2.(((\neg v2_struct_0 X2)\wedge((v2_group_1 X2)\wedge((v3_group_1 X2)\wedge((v3_group_9 X2 X0)\wedge(l1_group_9 X2 X0))))\Rightarrow(\forall X3.(((v1_funct_1 X3)\wedge((v1_funct_2 X3 (u1_struct_0 X1) (u1_struct_0 X2))\wedge((v1_group_6 X3 X1 X2)\wedge((v7_group_9 X3 X0 X1 X2)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X2))))))))\Rightarrow((v2_funct_2 X3 (u1_struct_0 X2))\Leftrightarrow(k14_group_9 X0 X1 X2 X3 = X2))))))$$