

t7_autgroup

(TMNp9VpTwQ4654uHg9FQ6A7pCJhFyafsWL7)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $m2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_autgroup : \iota \Rightarrow \iota$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1_group_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $v2_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v15_algstr_0 X0) \wedge ((v2_group_1 \\ & X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1.((v1_funct_1 \\ & X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 X0)) \wedge ((v1_group_6 \\ & X1 X0 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0)))))) \Rightarrow ((X1 \in k1_autgroup X0) \Leftrightarrow (v3_funct_2 \\ & X1 (u1_struct_0 X0) (u1_struct_0 X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X1) \wedge (m1_funct_2 X2 X0 X1)) \Rightarrow (\forall X3. (m2_funct_2 X3 X0 X1 X2) \Leftrightarrow (m1_subset_1 X3 X2)) \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1))))\wedge((v1_funct_1 X5)\wedge(m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X2 X3))))\Rightarrow(k1_partfun1 X0 X1 X2 X3 X4 X5 = k3_relat_1 X4 X5) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((\neg v2_struct_0 \\ & X0)\wedge((v2_group_1 X0)\wedge((v3_group_1 X0)\wedge(l3_algstr_0 X0))))\wedge \\ & (((\neg v2_struct_0 X1)\wedge((v2_group_1 X1)\wedge((v3_group_1 X1)\wedge(l3_algstr_0 \\ & X1))))\wedge(((\neg v2_struct_0 X2)\wedge((v2_group_1 X2)\wedge((v3_group_1 X2)\wedge \\ & (l3_algstr_0 X2))))\wedge(((v1_funct_1 X3)\wedge((v1_funct_2 X3 (u1_struct_0 \\ & X0) (u1_struct_0 X1))\wedge((v1_group_6 X3 X0 X1)\wedge(m1_subset_1 X3 (\\ & k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\wedge \\ & ((v1_funct_1 X4)\wedge((v1_funct_2 X4 (u1_struct_0 X1) (u1_struct_0 \\ & X2))\wedge((v1_group_6 X4 X1 X2)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X1) (u1_struct_0 X2))))))))\Rightarrow((v1_funct_1 (k3_relat_1 \\ & X3 X4))\wedge((v1_funct_2 (k3_relat_1 X3 X4) (u1_struct_0 X0) (u1_struct_0 \\ & X2))\wedge(v1_group_6 (k3_relat_1 X3 X4) X0 X2))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v1_funct_1 X1)\wedge((v1_funct_2 \\ & X1 X0 X0)\wedge((v3_funct_2 X1 X0 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (\\ & k2_zfmisc_1 X0 X0))))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X0)\wedge \\ & ((v3_funct_2 X2 X0 X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0))))\Rightarrow((v1_funct_1 (k3_relat_1 X1 X2))\wedge((v1_funct_2 (\\ & k3_relat_1 X1 X2) X0 X0)\wedge(v3_funct_2 (k3_relat_1 X1 X2) X0 X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u1_struct_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_funct_2 X2 X0 X1)\Rightarrow(\neg v1_xboole_0 X2) \quad (9)$$

Assume the following.

$$\forall X0.(l3_algstr_0 X0)\Rightarrow(l1_struct_0 X0) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1))))\wedge((v1_funct_1 X5)\wedge(m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X2 X3))))\Rightarrow((v1_funct_1 (k1_partfun1 X0 X1 X2 X3 X4 X5))\wedge(m1_subset_1 \\ & (k1_partfun1 X0 X1 X2 X3 X4 X5) (k1_zfmisc_1 (k2_zfmisc_1 X0 X3)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v15_algstr_0 X0)\wedge((v2_group_1 \\ & X0)\wedge((v3_group_1 X0)\wedge(l3_algstr_0 X0))))\Rightarrow(m1_funct_2 (k1_autgroup \\ & X0) (u1_struct_0 X0) (u1_struct_0 X0)) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v15_algstr_0 X0)\wedge((v2_group_1 \\ & X0)\wedge((v3_group_1 X0)\wedge(l3_algstr_0 X0))))\Rightarrow(\forall X1.(m1_funct_2 \\ & X1 (u1_struct_0 X0) (u1_struct_0 X0))\Rightarrow((X1 = k1_autgroup X0)\Leftrightarrow(\\ & (\forall X2.(m2_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X0) X1)\Rightarrow \\ & ((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\ & X0))\wedge((v1_group_6 X2 X0 X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 X0))))))))\wedge(\forall X2.((v1_funct_1 \\ & X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X0))\wedge((v1_group_6 \\ & X2 X0 X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0))))))))\Rightarrow((X2 \in X1)\Leftrightarrow((v2_funct_1 X2)\wedge(v2_funct_2 \\ & X2 (u1_struct_0 X0)))))) \end{aligned} \quad (13)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v15_algstr_0 X0)\wedge((v2_group_1 \\ & X0)\wedge((v3_group_1 X0)\wedge(l3_algstr_0 X0))))\Rightarrow(\forall X1.(m2_funct_2 \\ & X1 (u1_struct_0 X0) (u1_struct_0 X0) (k1_autgroup X0))\Rightarrow(\forall X2. \\ & (m2_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X0) (k1_autgroup \\ & X0))\Rightarrow(m2_funct_2 (k1_partfun1 (u1_struct_0 X0) (u1_struct_0 \\ & X0) (u1_struct_0 X0) (u1_struct_0 X0) X2 X1) (u1_struct_0 X0) (u1_struct_0 \\ & X0) (k1_autgroup X0)))) \end{aligned}$$