

t13_cayley

(TMdQ5QFD1225cQ38ffWDY1v5Nk4tF7LtPCU)

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Let $r2_tarSKI : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_group_6 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_cayley : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $r1_tarSKI : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ 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 $r2_wellord2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_cayley : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $v1_group_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. 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 $r1_group_6 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_monoid_0 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_tarSKI \\ & (k10_xtuple_0 X1) X0) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k9_xtuple_0 \\ & X1) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k9_xtuple_0 \\ & X1) X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(r2_wellord2 X0 k1_xboole_0) \Rightarrow (X0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. (\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((v3_funct_2 X2 X0 X1) \Rightarrow \\ & (v2_funct_2 (k3_cayley X0 X1 X2) (u1_struct_0 (k2_cayley X1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 \\ X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((v3_funct_2 X2 X0 X1) \Rightarrow \\ (v2_funct_1 (k3_cayley X0 X1 X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 \\ X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((v3_funct_2 X2 X0 X1) \Rightarrow \\ (v1_group_6 (k3_cayley X0 X1 X2) (k2_cayley X0) (k2_cayley X1)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(r2_wellord2 X0 X1) \Rightarrow (r2_wellord2 X1 X0) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((v15_algstr_0 X0) \wedge \\ ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))))) \wedge ((\neg \\ v2_struct_0 X1) \wedge ((v15_algstr_0 X1) \wedge ((v2_group_1 X1) \wedge ((v3_group_1 \\ X1) \wedge (l3_algstr_0 X1)))))) \Rightarrow (r2_group_6 X0 X0) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski X0 X0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(r2_wellord2 X0 X1) \Leftrightarrow (r2_tarski X0 X1) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((v15_algstr_0 X0) \wedge \\ ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))))) \wedge ((\neg \\ v2_struct_0 X1) \wedge ((v15_algstr_0 X1) \wedge ((v2_group_1 X1) \wedge ((v3_group_1 \\ X1) \wedge (l3_algstr_0 X1)))))) \Rightarrow ((r2_group_6 X0 X1) \Leftrightarrow (r1_group_6 X0 \\ X1)) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)) \Rightarrow (\\ k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v2_struct_0 (k2_cayley X0)) \wedge ((v15_algstr_0 (k2_cayley \\ X0)) \wedge ((v2_group_1 (k2_cayley X0)) \wedge ((v3_group_1 (k2_cayley X0)) \wedge \\ (v1_monoid_0 (k2_cayley X0)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 \\ & X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow \\ & ((v1_funct_1 (k3_cayley X0 X1 X2))\wedge((v1_funct_2 (k3_cayley X0 \\ & X1 X2) (u1_struct_0 (k2_cayley X0)) (u1_struct_0 (k2_cayley X1)))\wedge \\ & (m1_subset_1 (k3_cayley X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & (k2_cayley X0)) (u1_struct_0 (k2_cayley X1)))))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(v15_algstr_0 (k2_cayley X0)\wedge((v1_monoid_0 (k2_cayley X0))\wedge(l3_algstr_0 (k2_cayley X0))) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(r2_wellord2 X0 X1)\Leftrightarrow(\exists X2.((v1_relat_1 \\ & X2)\wedge(v1_funct_1 X2)\wedge((v2_funct_1 X2)\wedge((k9_xtuple_0 X2 = X0)\wedge \\ & (k10_xtuple_0 X2 = X1)))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(\\ & (v2_funct_2 X1 X0)\Leftrightarrow(k2_relset_1 X0 X1 = X0)) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((v2_group_1 X0)\wedge((v3_group_1 \\ & X0)\wedge(l3_algstr_0 X0))))\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge((v2_group_1 \\ & X1)\wedge((v3_group_1 X1)\wedge(l3_algstr_0 X1))))\Rightarrow((r1_group_6 X0 X1)\Leftrightarrow \\ & (\exists X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) \\ & (u1_struct_0 X1))\wedge((v1_group_6 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\wedge(v3_funct_2 \\ & X2 (u1_struct_0 X0) (u1_struct_0 X1)))))) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow(((v1_funct_1 X2)\wedge((v2_funct_1 X2)\wedge(v2_funct_2 \\ & X2 X1)))\Rightarrow((v1_funct_1 X2)\wedge(v3_funct_2 X2 X0 X1))) \end{aligned} \quad (19)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \end{aligned} \quad (20)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.(r2_tarski X0 X1)\Rightarrow(r2_group_6 (k2_cayley \\ & X0) (k2_cayley X1)) \end{aligned}$$