

t6_cayley
(TMFtFLJzrsBNq9oc6hwCSTNJq4S6RHhaxSF)

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Let $k1_group_1 : \iota \Rightarrow \iota$ be given. Let $k2_cayley : \iota \Rightarrow \iota$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. 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 $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $k2_group_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k17_monoid_0 : \iota \Rightarrow \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $v1_monoid_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_cayley : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (k2_group_1 X0 (k1_group_1 X0) = k1_group_1 X0) \quad (1)$$

Assume the following.

$$\forall X0.(k4_binop_1 (u1_struct_0 (k17_monoid_0 X0)) (u2_algstr_0 (k17_monoid_0 X0)) = k6_partfun1 X0) \wedge (k1_group_1 (k17_monoid_0 X0) = k6_partfun1 X0) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (u1_struct_0 (k2_cayley X0))) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 X0 X0) \wedge ((v3_funct_2 X1 X0 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))))) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 X0 X0) \wedge \\ & ((v3_funct_2 X1 X0 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0)))))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X0) \wedge \\ & ((v3_funct_2 X2 X0 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0)))))) \Rightarrow ((r2_relset_1 X0 X0 (k1_partfun1 X0 X0 X0 X0 X1 X2) X2) \Rightarrow \\ & (r2_relset_1 X0 X0 X1 (k6_partfun1 X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1_subset_1 X2 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))) \Rightarrow ((r2_relset_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & (((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))) \wedge ((v1_funct_1 X5) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X2 X3)))))) \Rightarrow (k1_partfun1 X0 X1 X2 X3 X4 X5 = k3_relat_1 X4 X5) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v2_struct_0 (k2_cayley X0)) \wedge ((v15_algstr_0 (k2_cayley \\ & X0)) \wedge ((v2_group_1 (k2_cayley X0)) \wedge ((v3_group_1 (k2_cayley X0)) \wedge \\ & (v1_monoid_0 (k2_cayley X0)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_partfun1 (k6_partfun1 X0) X0) \wedge (m1_subset_1 (k6_partfun1 \\ & X0) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v15_algstr_0 (k2_cayley X0)) \wedge ((v1_monoid_0 (k2_cayley \\ & X0)) \wedge (l3_algstr_0 (k2_cayley X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l3_algstr_0 X0) \Rightarrow (m1_subset_1 (k1_group_1 X0) (u1_struct_0 \\ & X0)) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. (((\neg v2_struct_0 X0) \wedge ((v2_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge (l3_algstr_0 X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((X2 = k2_group_1 \\ & X0 X1) \Leftrightarrow ((k6_algstr_0 X0 X1 X2 = k1_group_1 X0) \wedge (k6_algstr_0 X0 X2 \\ & X1 = k1_group_1 X0)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v15_algstr_0 X1) \wedge ((v1_monoid_0 X1) \wedge \\
& (l3_algstr_0 X1))) \Rightarrow ((X1 = k2_cayley X0) \Leftrightarrow ((u1_struct_0 X1 = k1_cayley \\
& X0) \wedge (\forall X2. (m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 (u1_struct_0 X1)) \Rightarrow (k6_algstr_0 X1 X2 X3 = k3_relat_1 \\
& X2 X3))))))
\end{aligned} \tag{12}$$

Theorem 1 $\forall X0. k1_group_1 (k2_cayley X0) = k6_partfun1 X0.$