

t74_monoid_0
(TMPgrtDsYSsjDKVdRJJ1JbfvpSiXNsAQpu4)

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Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k15_monoid_0 : \iota \Rightarrow \iota$ be given. Let $k1_realset1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_monoid_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $m2_monoid_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_card_3 : \iota \Rightarrow \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $v1_group_1 : \iota \Rightarrow o$ be given. Let $k12_monoid_0 : \iota \Rightarrow \iota$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v1_monoid_0 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (m2_monoid_0 X1 X0)) \Rightarrow (u2_algstr_0 X1 = k1_realset1 \\ & (u2_algstr_0 X0) (u1_struct_0 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. k1_funct_2 X0 X1 = k4_card_3 (k7_funcop_1 X0 X1) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. k7_funcop_1 X0 X1 = k2_funcop_1 X0 X1 \tag{3}$$

Assume the following.

$$\forall X0. (\neg v2_struct_0 (k15_monoid_0 X0)) \wedge ((v15_algstr_0 (k15_monoid_0 X0)) \wedge (v1_group_1 (k15_monoid_0 X0))) \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v2_struct_0 (k12_monoid_0 X0)) \wedge ((v15_algstr_0 \\ & (k12_monoid_0 X0)) \wedge ((v1_group_1 (k12_monoid_0 X0)) \wedge ((v3_group_1 \\ & (k12_monoid_0 X0)) \wedge (v1_monoid_0 (k12_monoid_0 X0)))))) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0. (v15_algstr_0 (k15_monoid_0 X0)) \wedge (m2_monoid_0 (k15_monoid_0 X0) (k12_monoid_0 X0)) \tag{6}$$

Assume the following.

$$\forall X0.(v15_algstr_0 (k12_monoid_0 X0)) \wedge ((v1_monoid_0 (k12_monoid_0 X0)) \wedge (l3_algstr_0 (k12_monoid_0 X0))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v15_algstr_0 X1) \wedge (m2_monoid_0 X1 (k12_monoid_0 X0))) \Rightarrow ((X1 = k15_monoid_0 X0) \Leftrightarrow (u1_struct_0 X1 = k1_funct_2 X0 X0)) \quad (8)$$

Assume the following.

$$\forall X0.k14_monoid_0 X0 = u2_algstr_0 (k12_monoid_0 X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k2_funcop_1 X0 X1 = k2_zfmisc_1 X0 (k1_tarski X1) \quad (10)$$

Theorem 1

$$\forall X0.u2_algstr_0 (k15_monoid_0 X0) = k1_realset1 (k14_monoid_0 X0) (k1_funct_2 X0 X0)$$