

t57_monoid_0

(TMLp2F5PaBXe5cXm3TK9hmUMhJTUNuNCst9)

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Let $k48_binop_2 : \iota$ be given. Let $k1_realset1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k35_binop_2 : \iota$ be given. Let $k5_numbers : \iota$ 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 $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $g3_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_monoid_0 : \iota$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $v1_group_1 : \iota \Rightarrow o$ be given. Let $v17_monoid_0 : \iota \Rightarrow o$ be given. Let $k6_monoid_0 : \iota$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ 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.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 \\ & X0 X0) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\ & X0 X0) X0)))))) \Rightarrow (\forall X2. \forall X3. (g3_algstr_0 X0 X1 = g3_algstr_0 \\ & X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & (\neg v2_struct_0 k7_monoid_0) \wedge ((v15_algstr_0 k7_monoid_0) \wedge ((\\ & v1_group_1 k7_monoid_0) \wedge ((v17_monoid_0 k7_monoid_0) \wedge (m2_monoid_0 \\ & k7_monoid_0 k6_monoid_0)))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & (\neg v2_struct_0 k6_monoid_0) \wedge ((v15_algstr_0 k6_monoid_0) \wedge ((\\ & v1_group_1 k6_monoid_0) \wedge ((v3_group_1 k6_monoid_0) \wedge ((v5_group_1 \\ & k6_monoid_0) \wedge (l3_algstr_0 k6_monoid_0)))))) \end{aligned} \tag{4}$$

Assume the following.

$$(v1_funct_1 \ k35_binop_2) \wedge ((v1_funct_2 \ k35_binop_2 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers) \ k1_numbers) \wedge (m1_subset_1 \ k35_binop_2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers) \ k1_numbers)))) \quad (5)$$

Assume the following.

$$k48_binop_2 = u2_algstr_0 \ k7_monoid_0 \quad (6)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 \ X0) \wedge ((v15_algstr_0 \ X0) \wedge ((v1_group_1 \ X0) \wedge ((v17_monoid_0 \ X0) \wedge (m2_monoid_0 \ X0 \ k6_monoid_0)))))) \Rightarrow ((X0 = k7_monoid_0) \Leftrightarrow (u1_struct_0 \ X0 = k5_numbers)) \quad (7)$$

Assume the following.

$$k6_monoid_0 = g3_algstr_0 \ k1_numbers \ k35_binop_2 \quad (8)$$

Assume the following.

$$\forall X0. (l3_algstr_0 \ X0) \Rightarrow ((v15_algstr_0 \ X0) \Rightarrow (X0 = g3_algstr_0 \ (u1_struct_0 \ X0) \ (u2_algstr_0 \ X0))) \quad (9)$$

Theorem 1 $k48_binop_2 = k1_realset1 \ k35_binop_2 \ k5_numbers$.