

t54_monoid_0
(TMEqE8QrWqYoYv4cHGjs4tqLPf3VtmSzyVX)

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Let $k4_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k7_monoid_0 : \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k48_binop_2 : \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ 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 $m2_monoid_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_monoid_0 : \iota$ be given. Assume the following.

$$k4_binop_1 \ k5_numbers \ k48_binop_2 = np_1 \tag{1}$$

Assume the following.

$$\begin{aligned} &(\neg v2_struct_0 \ k7_monoid_0) \wedge ((v15_algstr_0 \ k7_monoid_0) \wedge ((\\ &v1_group_1 \ k7_monoid_0) \wedge ((v17_monoid_0 \ k7_monoid_0) \wedge (m2_monoid_0 \\ &k7_monoid_0 \ k6_monoid_0)))) \end{aligned} \tag{2}$$

Assume the following.

$$k48_binop_2 = u2_algstr_0 \ k7_monoid_0 \tag{3}$$

Assume the following.

$$\begin{aligned} &\forall X0. ((\neg v2_struct_0 \ X0) \wedge ((v15_algstr_0 \ X0) \wedge ((v1_group_1 \\ &X0) \wedge ((v17_monoid_0 \ X0) \wedge (m2_monoid_0 \ X0 \ k6_monoid_0)))))) \Rightarrow ((\\ &X0 = k7_monoid_0) \Leftrightarrow (u1_struct_0 \ X0 = k5_numbers)) \end{aligned} \tag{4}$$

Theorem 1 $k4_binop_1 \ (u1_struct_0 \ k7_monoid_0) \ (u2_algstr_0 \ k7_monoid_0) = np_1.$