

t75_monoid_0

(TMF14YnTAh1sXn7CWctZiLeMTLvGW7G8we7)

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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 $k15_monoid_0 : \iota \Rightarrow \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $m2_monoid_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_monoid_0 : \iota \Rightarrow \iota$ be given. Let $v1_group_1 : \iota \Rightarrow o$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $v15_algstr_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (u1_struct_0 (k15_monoid_0 X1))) \Leftrightarrow ((v1_funct_1 X0) \wedge ((v1_funct_2 X0 X1 X1) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 X1 X1)))))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge (m2_monoid_0 X1 (k12_monoid_0 X0))) \Rightarrow ((m1_subset_1 (k6_partfun1 X0) (u1_struct_0 X1)) \Rightarrow ((v1_group_1 X1) \wedge (k4_binop_1 (u1_struct_0 X1) (u2_algstr_0 X1) = k6_partfun1 X0))) \quad (2)$$

Assume the following.

$$\forall X0. k6_partfun1 X0 = k4_relat_1 X0 \quad (3)$$

Assume the following.

$$\forall X0. (\neg v2_struct_0 (k15_monoid_0 X0)) \wedge ((v15_algstr_0 (k15_monoid_0 X0)) \wedge (v1_group_1 (k15_monoid_0 X0))) \quad (4)$$

Assume the following.

$$\forall X0. (v1_relat_1 (k4_relat_1 X0)) \wedge ((v4_relat_1 (k4_relat_1 X0) X0) \wedge ((v1_funct_1 (k4_relat_1 X0)) \wedge (v1_partfun1 (k4_relat_1 X0) X0))) \quad (5)$$

Assume the following.

$$\forall X0.(v1_partfun1 (k6_partfun1 X0) X0) \wedge (m1_subset_1 (k6_partfun1 X0) (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \quad (6)$$

Assume the following.

$$\forall X0.(v15_algstr_0 (k15_monoid_0 X0)) \wedge (m2_monoid_0 (k15_monoid_0 X0) (k12_monoid_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v1_partfun1 X2 X0) \Rightarrow (v1_funct_2 X2 X0 X1)) \quad (8)$$

Theorem 1

$$\forall X0.k4_binop_1 (u1_struct_0 (k15_monoid_0 X0)) (u2_algstr_0 (k15_monoid_0 X0)) = k6_partfun1 X0$$