

l22_monoid_1

(TMHJFeU95brvWtd2n3Ni5QkgsHMP3DvJUFn)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $v1_monoid_0 : \iota \Rightarrow o$ be given. Let $k9_monoid_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((\neg v2_struct_0 X2) \wedge (l3_algstr_0 \\ X2)) \Rightarrow ((m1_subset_1 X0 (u1_struct_0 (k9_monoid_1 X2 X1))) \Leftrightarrow ((v1_funct_1 \\ X0) \wedge ((v1_funct_2 X0 X1 (u1_struct_0 X2)) \wedge (m1_subset_1 X0 (k1_zfmisc_1 \\ (k2_zfmisc_1 X1 (u1_struct_0 X2))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. (l3_algstr_0 X0) \Rightarrow (l1_struct_0 X0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \Rightarrow \\ (l3_algstr_0 (k9_monoid_1 X0 X1)) \quad (3)$$

Assume the following.

$$\forall X0. (l1_struct_0 X0) \Rightarrow ((v1_monoid_0 X0) \Leftrightarrow (\forall X1. (\\ m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((v1_relat_1 X1) \wedge (v1_funct_1 \\ X1)))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (5)$$

Theorem 1

$$\forall X0. \forall X1. ((\neg v2_struct_0 X1) \wedge (l3_algstr_0 X1)) \Rightarrow \\ (v1_monoid_0 (k9_monoid_1 X1 X0))$$