

t22_monoid_0 (TMVb- mgw9qCVGRc48rCvprSgmj9gTMBfbXag)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $m2_monoid_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m3_monoid_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(l4_algstr_0 X0) \Rightarrow (\forall X1.(l4_algstr_0 X1) \Rightarrow ((m3_monoid_0 X1 X0) \Leftrightarrow ((r1_tarski (u2_algstr_0 X1) (u2_algstr_0 X0)) \wedge (k5_struct_0 X1 = k5_struct_0 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.(l3_algstr_0 X0) \Rightarrow (\forall X1.(l3_algstr_0 X1) \Rightarrow ((m2_monoid_0 X1 X0) \Leftrightarrow (r1_tarski (u2_algstr_0 X1) (u2_algstr_0 X0)))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1_tarski X0 X1) \wedge (r1_tarski X1 X0)) \quad (3)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l3_algstr_0 X0)) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (l4_algstr_0 X1)) \Rightarrow ((m2_monoid_0 X0 X0) \wedge (m3_monoid_0 X1 X1)))$$