

t23_quantal1

(TMZLeMnFxjMkwXkegZCHsRSgeSuZrc4ky5u)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_group_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $v4_lattice3 : \iota \Rightarrow o$ be given. Let $v7_quantal1 : \iota \Rightarrow o$ be given. Let $v8_quantal1 : \iota \Rightarrow o$ be given. Let $v20_quantal1 : \iota \Rightarrow o$ be given. Let $v21_quantal1 : \iota \Rightarrow o$ be given. Let $l3_quantal1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_quantal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_quantal1 : \iota \Rightarrow o$ be given. Let $k1_quantal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_quantal1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_quantal1 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $k3_quantal1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_group_1 X0) \wedge ((v10_lattices \\ & X0) \wedge ((v4_lattice3 X0) \wedge ((v7_quantal1 X0) \wedge ((v8_quantal1 X0) \wedge \\ & (l1_quantal1 X0))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((r3_lattices X0 X2 X3) \Rightarrow ((r3_lattices \\ & X0 (k1_quantal1 X0 X3 X1) (k1_quantal1 X0 X2 X1)) \wedge (r3_lattices X0 \\ & (k2_quantal1 X0 X3 X1) (k2_quantal1 X0 X2 X1))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (l3_quantal1 X0) \Rightarrow (l2_quantal1 X0) \tag{2}$$

Assume the following.

$$\forall X0. (l2_quantal1 X0) \Rightarrow ((l1_quantal1 X0) \wedge (l4_algstr_0 X0)) \tag{3}$$

Assume the following.

$$\forall X0. (l3_quantal1 X0) \Rightarrow (m1_subset_1 (k3_quantal1 X0) (u1_struct_0 X0)) \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l3_quantal1 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (k5_quantal1 X0 X1 = k1_quantal1 \\ & X0 X1 (k3_quantal1 X0))) \end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v1_group_1 X0) \wedge ((v3_group_1 \\ & X0) \wedge ((v10_lattices X0) \wedge ((v4_lattice3 X0) \wedge ((v7_quantal1 X0) \wedge \\ & ((v8_quantal1 X0) \wedge ((v20_quantal1 X0) \wedge ((v21_quantal1 X0) \wedge (l3_quantal1 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r3_lattices \\ & X0 X1 X2) \Rightarrow (r3_lattices X0 (k5_quantal1 X0 X2) (k5_quantal1 X0 X1)))))) \end{aligned}$$