

t46_knaster

(TMHA3NqYTUSixrj7v1N41NfW5JQvj5MLDb8)

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Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_lattice3 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v14_quantal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v6_cohsp_1 : \iota \Rightarrow o$ be given. Let $r1_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $v18_lattices : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v19_lattices : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \neg(v1_xboole_0 X0) \wedge ((X0 \neq X1) \wedge (v1_xboole_0 X1)) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (m1_subset_1 X1 (u1_struct_0 (k1_lattice3 \\ X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 (k1_lattice3 \\ X0))) \Rightarrow ((r1_lattices (k1_lattice3 X0) X1 X2) \Leftrightarrow (r1_tarski X1 X2))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0))) \Rightarrow (k3_funct_2 X0 \\ X1 X2 X3 = k1_funct_1 X2 X3) \end{aligned} \quad (3)$$

Assume the following.

$$\exists X0. v1_xboole_0 X0 \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices \\ X0))) \Rightarrow (\exists X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ X0))) \wedge ((\neg v1_xboole_0 X1) \wedge ((v18_lattices X1 X0) \wedge (v19_lattices \\ X1 X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(v3_lattices (k1_lattice3 X0)) \wedge (v10_lattices (k1_lattice3 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(\neg v2_struct_0 (k1_lattice3 X0)) \wedge (v3_lattices (k1_lattice3 X0)) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0) \wedge \\ & (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0)) \Rightarrow (m1_subset_1 (\\ & k3_funct_2 X0 X1 X2 X3) X1) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(v3_lattices (k1_lattice3 X0)) \wedge (l3_lattices (k1_lattice3 X0)) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ & (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((v6_cohsp_1 X2) \Leftrightarrow (\forall X3. \\ & (m1_subset_1 X3 X0) \Rightarrow (\forall X4.(m1_subset_1 X4 X0) \Rightarrow ((r1_tarski \\ & X3 X4) \Rightarrow (r1_tarski (k3_funct_2 X0 X1 X2 X3) (k3_funct_2 X0 X1 X2 X4))))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l3_lattices X0)) \Rightarrow (\forall X1. \\ & ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 \\ & X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0)))))) \Rightarrow ((v14_quantal1 X1 X0) \Leftrightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\ & (u1_struct_0 X0)) \Rightarrow ((r1_lattices X0 X2 X3) \Rightarrow (r1_lattices X0 (k3_funct_2 \\ & (u1_struct_0 X0) (u1_struct_0 X0) X1 X2) (k3_funct_2 (u1_struct_0 \\ & X0) (u1_struct_0 X0) X1 X3)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge (\\ & (v1_funct_2 X1 (u1_struct_0 (k1_lattice3 X0)) (u1_struct_0 (k1_lattice3 \\ & X0))) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & (k1_lattice3 X0)) (u1_struct_0 (k1_lattice3 X0)))))) \Rightarrow ((v14_quantal1 \\ & X1 (k1_lattice3 X0)) \Leftrightarrow (v6_cohsp_1 X1))) \end{aligned}$$