

t27_knaster

(TMYX7YjvD1ySBvqromAQxcTPktxg3QCaM6J)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $v4_lattice3 : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ 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 $v14_quantal1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $r3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r2_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_abian : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_knaster : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_lattices : \iota \Rightarrow o$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Let $r1_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_ordinal1 : \iota \Rightarrow \iota$ be given. Let $k4_knaster : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_ordinal1 : \iota \Rightarrow o$ be given. Let $v6_lattices : \iota \Rightarrow o$ be given. Let $v8_lattices : \iota \Rightarrow o$ be given. Let $v9_lattices : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $l1_lattices : \iota \Rightarrow o$ be given. Let $v2_ordinal1 : \iota \Rightarrow o$ be given. Let $v5_lattices : \iota \Rightarrow o$ be given. Let $v7_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v4_lattices X0) \wedge (l2_lattices \\ & X0))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (((r1_lattices X0 X1 X2) \wedge (r1_lattices \\ & X0 X2 X1)) \Rightarrow (X1 = X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v4_lattice3 \\ & X0) \wedge (l3_lattices X0)))) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 \\ & X1 (u1_struct_0 X0) (u1_struct_0 X0)) \wedge ((v14_quantal1 X1 X0) \wedge (\\ & m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ & X0)))))) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r3_lattices \\ & X0 (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X0) X1 X2) X2) \Rightarrow (\forall X3. \\ & (v3_ordinal1 X3) \Rightarrow (\forall X4. (v3_ordinal1 X4) \Rightarrow ((r1_ordinal1 \\ & X3 X4) \Rightarrow (r3_lattices X0 (k6_knaster X0 X1 X2 X4) (k6_knaster X0 X1 \\ & X2 X3)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(v3_ordinal1\ X0) \Rightarrow (\forall X1.(v3_ordinal1\ X1) \Rightarrow ((X0 \in X1) \Leftrightarrow (r1_ordinal1\ (k1_ordinal1\ X0)\ X1))) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0) \wedge ((v10_lattices\ X0) \wedge (l3_lattices\ X0))) \Rightarrow (\forall X1.((v1_funct_1\ X1) \wedge ((v1_funct_2\ X1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0)) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0)))))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0)) \Rightarrow (\forall X3.(v3_ordinal1\ X3) \Rightarrow (k4_knaster\ X0\ X1\ X2\ (k1_ordinal1\ X3) = k1_funct_1\ X1\ (k4_knaster\ X0\ X1\ X2\ X3)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(v1_ordinal1\ X0) \Rightarrow (\forall X1.(v3_ordinal1\ X1) \Rightarrow ((r2_xboole_0\ X0\ X1) \Rightarrow (X0 \in X1))) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0\ X0) \wedge ((v6_lattices\ X0) \wedge ((v8_lattices\ X0) \wedge ((v9_lattices\ X0) \wedge (l3_lattices\ X0)))))) \wedge \\ & ((m1_subset_1\ X1\ (u1_struct_0\ X0)) \wedge (m1_subset_1\ X2\ (u1_struct_0\ X0))) \Rightarrow ((r3_lattices\ X0\ X1\ X2) \Leftrightarrow (r1_lattices\ X0\ X1\ X2)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2_struct_0\ X0) \wedge ((v10_lattices\ X0) \wedge (l3_lattices\ X0))) \wedge ((v1_funct_1\ X1) \wedge \\ & ((v1_funct_2\ X1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0)) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0)))))) \wedge \\ & ((m1_subset_1\ X2\ (u1_struct_0\ X0)) \wedge (v3_ordinal1\ X3))) \Rightarrow (k6_knaster\ X0\ X1\ X2\ X3 = k4_knaster\ X0\ X1\ X2\ X3) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0\ X0) \wedge \\ & (((v1_funct_1\ X2) \wedge ((v1_funct_2\ X2\ X0\ X1) \wedge (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))))) \wedge (m1_subset_1\ X3\ X0))) \Rightarrow (k3_funct_2\ X0\ X1\ X2\ X3 = k1_funct_1\ X2\ X3) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0\ X0) \wedge (l1_struct_0\ X0)) \Rightarrow (\neg v1_xboole_0\ (u1_struct_0\ X0)) \quad (9)$$

Assume the following.

$$\forall X0.(v3_ordinal1\ X0) \Rightarrow ((\neg v1_xboole_0\ (k1_ordinal1\ X0)) \wedge (v3_ordinal1\ (k1_ordinal1\ X0))) \quad (10)$$

Assume the following.

$$\forall X0.(l3_lattices\ X0)\Rightarrow((l1_lattices\ X0)\wedge(l2_lattices\ X0)) \quad (11)$$

Assume the following.

$$\forall X0.(l1_lattices\ X0)\Rightarrow(l1_struct_0\ X0) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2_struct_0 \\ & X0)\wedge((v10_lattices\ X0)\wedge(l3_lattices\ X0))\wedge((v1_funct_1\ X1)\wedge \\ & ((v1_funct_2\ X1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0))\wedge(m1_subset_1 \\ & X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0))))))\wedge \\ & ((m1_subset_1\ X2\ (u1_struct_0\ X0))\wedge(v3_ordinal1\ X3)))\Rightarrow(m1_subset_1 \\ & (k6_knaster\ X0\ X1\ X2\ X3)\ (u1_struct_0\ X0)) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow \\ & (\forall X2.((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ X0\ X0)\wedge(m1_subset_1 \\ & X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X0))))))\Rightarrow((r2_abian\ X0\ X1\ X2)\Leftrightarrow(\\ & X1 = k3_funct_2\ X0\ X0\ X2\ X1))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v3_ordinal1\ X0)\wedge(v3_ordinal1\ X1))\Rightarrow((r1_ordinal1\ X0\ X1)\vee(r1_ordinal1\ X1\ X0)) \quad (15)$$

Assume the following.

$$\forall X0.(v3_ordinal1\ X0)\Rightarrow((v1_ordinal1\ X0)\wedge(v2_ordinal1\ X0)) \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l3_lattices\ X0)\Rightarrow(((\neg v2_struct_0\ X0)\wedge(v10_lattices \\ & X0))\Rightarrow((\neg v2_struct_0\ X0)\wedge((v4_lattices\ X0)\wedge((v5_lattices\ X0)\wedge \\ & ((v6_lattices\ X0)\wedge((v7_lattices\ X0)\wedge((v8_lattices\ X0)\wedge(v9_lattices \\ & X0)))))))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1)\Rightarrow(\neg X1 \in X0) \quad (18)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0)\wedge((v10_lattices\ X0)\wedge((v4_lattice3 \\ & X0)\wedge(l3_lattices\ X0))))\Rightarrow(\forall X1.((v1_funct_1\ X1)\wedge((v1_funct_2 \\ & X1\ (u1_struct_0\ X0)\ (u1_struct_0\ X0))\wedge((v14_quantal1\ X1\ X0)\wedge(\\ & m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0 \\ & X0))))))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ X0))\Rightarrow((r3_lattices \\ & X0\ (k3_funct_2\ (u1_struct_0\ X0)\ (u1_struct_0\ X0)\ X1\ X2)\ X2)\Rightarrow(\forall X3. \\ & (v3_ordinal1\ X3)\Rightarrow(\forall X4.(v3_ordinal1\ X4)\Rightarrow(\neg(r2_xboole_0 \\ & X3\ X4)\wedge((\neg r2_abian\ (u1_struct_0\ X0)\ (k6_knaster\ X0\ X1\ X2\ X4)\ X1)\wedge \\ & (k6_knaster\ X0\ X1\ X2\ X3 = k6_knaster\ X0\ X1\ X2\ X4)))))) \end{aligned}$$