

l19_lattices

(TMRN7rhml1oV79UHHXfa2v1kS1u95Jvm9tP9)

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Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $g3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $v13_lattices : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_lattices : \iota \Rightarrow o$ be given. Let $l1_lattices : \iota \Rightarrow o$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_lattices : \iota \Rightarrow \iota$ be given. Let $u1_lattices : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (v1_xboole_0 X1) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (k2_zfmisc_1 (k1_zfmisc_1 \\ & \quad k1_xboole_0) (k1_zfmisc_1 k1_xboole_0)) (k1_zfmisc_1 k1_xboole_0)) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k1_zfmisc_1 \\ & \quad k1_xboole_0) (k1_zfmisc_1 k1_xboole_0)) (k1_zfmisc_1 k1_xboole_0)))))) \Rightarrow \\ & (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 (k1_zfmisc_1 \\ & \quad k1_xboole_0) (k1_zfmisc_1 k1_xboole_0)) (k1_zfmisc_1 k1_xboole_0)) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k1_zfmisc_1 \\ & \quad k1_xboole_0) (k1_zfmisc_1 k1_xboole_0)) (k1_zfmisc_1 k1_xboole_0)))))) \Rightarrow \\ & ((\neg v2_struct_0 (g3_lattices (k1_zfmisc_1 k1_xboole_0) X0 X1)) \wedge \\ & ((v10_lattices (g3_lattices (k1_zfmisc_1 k1_xboole_0) X0 X1)) \wedge \\ & (l3_lattices (g3_lattices (k1_zfmisc_1 k1_xboole_0) X0 X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v1_funct_1 X1)\wedge((v1_funct_2 \\ & X1 (k2_zfmisc_1 X0 X0) X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 X0 X0) X0))))\wedge((v1_funct_1 X2)\wedge((v1_funct_2 X2 \\ & (k2_zfmisc_1 X0 X0) X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 X0 X0) X0))))))\Rightarrow(\forall X3.\forall X4.\forall X5. \\ & (g3_lattices X0 X1 X2 = g3_lattices X3 X4 X5)\Rightarrow((X0 = X3)\wedge((X1 = X4)\wedge \\ & (X2 = X5)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(((v1_funct_1 \\ & X1)\wedge((v1_funct_2 X1 (k2_zfmisc_1 X0 X0) X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0))))\wedge((v1_funct_1 X2)\wedge((\\ & v1_funct_2 X2 (k2_zfmisc_1 X0 X0) X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0))))))\Rightarrow((\neg v2_struct_0 (g3_lattices \\ & X0 X1 X2))\wedge(v3_lattices (g3_lattices X0 X1 X2))) \end{aligned} \quad (5)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (6)$$

Assume the following.

$$\forall X0.\neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (7)$$

Assume the following.

$$\forall X0.(l3_lattices X0)\Rightarrow((l1_lattices X0)\wedge(l2_lattices X0)) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_lattices \\ & X0))\wedge((m1_subset_1 X1 (u1_struct_0 X0)\wedge(m1_subset_1 X2 (u1_struct_0 \\ & X0))))\Rightarrow(m1_subset_1 (k2_lattices X0 X1 X2) (u1_struct_0 X0)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_lattices X0))\Rightarrow((v13_lattices \\ & X0)\Leftrightarrow(\exists X1.(m1_subset_1 X1 (u1_struct_0 X0))\wedge(\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow((k2_lattices X0 X1 X2 = X1)\wedge \\ & (k2_lattices X0 X2 X1 = X1)))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (11)$$

Assume the following.

$$\forall X0.(l3_lattices X0)\Rightarrow((v3_lattices X0)\Rightarrow(X0 = g3_lattices (u1_struct_0 X0) (u2_lattices X0) (u1_lattices X0))) \quad (12)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (k2_zfmisc_1 (k1_zfmisc_1 \\ & \quad k1_xboole_0) (k1_zfmisc_1 k1_xboole_0)) (k1_zfmisc_1 k1_xboole_0)) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k1_zfmisc_1 \\ & \quad k1_xboole_0) (k1_zfmisc_1 k1_xboole_0)) (k1_zfmisc_1 k1_xboole_0)))))) \Rightarrow \\ & (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 (k1_zfmisc_1 \\ & \quad k1_xboole_0) (k1_zfmisc_1 k1_xboole_0)) (k1_zfmisc_1 k1_xboole_0)) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k1_zfmisc_1 \\ & \quad k1_xboole_0) (k1_zfmisc_1 k1_xboole_0)) (k1_zfmisc_1 k1_xboole_0)))))) \Rightarrow \\ & ((\neg v2_struct_0 (g3_lattices (k1_zfmisc_1 k1_xboole_0) X0 X1)) \wedge \\ & (v10_lattices (g3_lattices (k1_zfmisc_1 k1_xboole_0) X0 X1)) \wedge \\ & (v13_lattices (g3_lattices (k1_zfmisc_1 k1_xboole_0) X0 X1)) \wedge \\ & (l3_lattices (g3_lattices (k1_zfmisc_1 k1_xboole_0) X0 X1)))))) \end{aligned}$$