

t36_lattice5 (TMVnVvC- SqAg6MzmPJR SocBwtbpeB6m2RR5s)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $v1_lattice3 : \iota \Rightarrow o$ be given. Let $v2_lattice3 : \iota \Rightarrow o$ be given. Let $v1_yellow_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_lattice5 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_lattice5 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_lattice5 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $m1_lattice5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_lattice5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_lattice5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_lattice5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v3_orders_2 X1) \wedge \\
& ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 \\
& X1) \wedge ((v1_yellow_0 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2. (\\
& v3_ordinal1 X2) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 \\
& (k2_zfmisc_1 X0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) (u1_struct_0 X1)))))) \Rightarrow (((v1_lattice5 \\
& X3 X0 X1) \wedge (v3_lattice5 X3 X0 X1)) \Rightarrow (\forall X4. (m1_lattice5 X4 X0 \\
& X1 X3) \Rightarrow ((r1_ordinal1 X2 (k7_lattice5 X0 X1 X3)) \Rightarrow (v3_lattice5 (\\
& k12_lattice5 X0 X1 X3 X4 X2) (k8_lattice5 X0 X2) X1))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((v3_orders_2 X1) \wedge \\
& ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 \\
& X1) \wedge ((v1_yellow_0 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2. (\\
& v3_ordinal1 X2) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 \\
& (k2_zfmisc_1 X0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) (u1_struct_0 X1)))))) \Rightarrow ((v1_lattice5 \\
& X3 X0 X1) \Rightarrow (\forall X4. (m1_lattice5 X4 X0 X1 X3) \Rightarrow (v1_lattice5 (k12_lattice5 \\
& X0 X1 X3 X4 X2) (k8_lattice5 X0 X2) X1))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v3_orders_2 X1) \wedge \\
& ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 \\
& X1) \wedge ((v1_yellow_0 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2.(\\
& v3_ordinal1 X2) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 \\
& (k2_zfmisc_1 X0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 \\
& (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) (u1_struct_0 X1)))))) \Rightarrow ((v2_lattice5 \\
& X3 X0 X1) \Rightarrow (\forall X4.(m1_lattice5 X4 X0 X1 X3) \Rightarrow (v2_lattice5 (k12_lattice5 \\
& X0 X1 X3 X4 X2) (k8_lattice5 X0 X2) X1))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1_xboole_0 \\
& X0) \wedge (((v3_orders_2 X1) \wedge ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge \\
& ((v1_lattice3 X1) \wedge ((v2_lattice3 X1) \wedge ((v1_yellow_0 X1) \wedge (l1_orders_2 \\
& X1)))))) \wedge (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 X0 \\
& X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& (k2_zfmisc_1 X0 X0) (u1_struct_0 X1)))))) \wedge ((m1_lattice5 X3 X0 \\
& X1 X2) \wedge (v3_ordinal1 X4)))) \Rightarrow ((v1_funct_1 (k12_lattice5 X0 X1 \\
& X2 X3 X4) \wedge ((v1_funct_2 (k12_lattice5 X0 X1 X2 X3 X4) (k2_zfmisc_1 \\
& (k8_lattice5 X0 X4) (k8_lattice5 X0 X4) (u1_struct_0 X1)) \wedge (m1_subset_1 \\
& (k12_lattice5 X0 X1 X2 X3 X4) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 \\
& (k8_lattice5 X0 X4) (k8_lattice5 X0 X4) (u1_struct_0 X1))))))
\end{aligned} \tag{4}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v3_orders_2 X1) \wedge \\
& ((v4_orders_2 X1) \wedge ((v5_orders_2 X1) \wedge ((v1_lattice3 X1) \wedge ((v2_lattice3 \\
& X1) \wedge ((v1_yellow_0 X1) \wedge (l1_orders_2 X1)))))) \Rightarrow (\forall X2.(\\
& v3_ordinal1 X2) \Rightarrow (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 \\
& (k2_zfmisc_1 X0 X0) (u1_struct_0 X1)) \wedge ((v1_lattice5 X3 X0 X1) \wedge \\
& ((v2_lattice5 X3 X0 X1) \wedge ((v3_lattice5 X3 X0 X1) \wedge (m1_subset_1 X3 \\
& (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) (u1_struct_0 X1)))))) \Rightarrow \\
& (\forall X4.(m1_lattice5 X4 X0 X1 X3) \Rightarrow ((r1_ordinal1 X2 (k7_lattice5 \\
& X0 X1 X3) \Rightarrow ((v1_funct_1 (k12_lattice5 X0 X1 X3 X4 X2) \wedge ((v1_funct_2 \\
& (k12_lattice5 X0 X1 X3 X4 X2) (k2_zfmisc_1 (k8_lattice5 X0 X2) (k8_lattice5 \\
& X0 X2) (u1_struct_0 X1)) \wedge ((v1_lattice5 (k12_lattice5 X0 X1 X3 \\
& X4 X2) (k8_lattice5 X0 X2) X1) \wedge ((v2_lattice5 (k12_lattice5 X0 X1 \\
& X3 X4 X2) (k8_lattice5 X0 X2) X1) \wedge ((v3_lattice5 (k12_lattice5 X0 \\
& X1 X3 X4 X2) (k8_lattice5 X0 X2) X1) \wedge (m1_subset_1 (k12_lattice5 \\
& X0 X1 X3 X4 X2) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k8_lattice5 \\
& X0 X2) (k8_lattice5 X0 X2) (u1_struct_0 X1))))))))))
\end{aligned}$$