

t11_filter_2 (TMJPKieXK- Fes78YhSBFBS6xc522wKNoUSUr)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $v15_lattices : \iota \Rightarrow o$ be given. Let $v16_lattices : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $g3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $u2_lattices : \iota \Rightarrow \iota$ be given. Let $u1_lattices : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v13_lattices : \iota \Rightarrow o$ be given. Let $k5_lattices : \iota \Rightarrow \iota$ be given. Let $k1_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v14_lattices : \iota \Rightarrow o$ be given. Let $k6_lattices : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v13_lattices \\ & X0) \wedge (l3_lattices X0)))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v10_lattices \\ & X1) \wedge ((v13_lattices X1) \wedge (l3_lattices X1)))) \Rightarrow ((g3_lattices (\\ & u1_struct_0 X0) (u2_lattices X0) (u1_lattices X0) = g3_lattices \\ & (u1_struct_0 X1) (u2_lattices X1) (u1_lattices X1)) \Rightarrow (k5_lattices \\ & X0 = k5_lattices X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l3_lattices X0)) \Rightarrow (\forall X1. \\ & ((\neg v2_struct_0 X1) \wedge (l3_lattices X1)) \Rightarrow ((g3_lattices (u1_struct_0 \\ & X0) (u2_lattices X0) (u1_lattices X0) = g3_lattices (u1_struct_0 \\ & X1) (u2_lattices X1) (u1_lattices X1)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X1)) \Rightarrow (\forall X5. \\ & (m1_subset_1 X5 (u1_struct_0 X1)) \Rightarrow (((X2 = X4) \wedge (X3 = X5)) \Rightarrow ((k1_lattices \\ & X0 X2 X3 = k1_lattices X1 X4 X5) \wedge ((k2_lattices X0 X2 X3 = k2_lattices \\ & X1 X4 X5) \wedge (((r1_lattices X0 X2 X3) \Rightarrow (r1_lattices X1 X4 X5)) \wedge ((r1_lattices \\ & X1 X4 X5) \Rightarrow (r1_lattices X0 X2 X3)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v14_lattices \\
& X0) \wedge (l3_lattices X0)))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v10_lattices \\
& X1) \wedge ((v14_lattices X1) \wedge (l3_lattices X1)))) \Rightarrow ((g3_lattices (\\
& u1_struct_0 X0) (u2_lattices X0) (u1_lattices X0) = g3_lattices \\
& (u1_struct_0 X1) (u2_lattices X1) (u1_lattices X1)) \Rightarrow (k6_lattices \\
& X0 = k6_lattices X1))) \tag{3}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l3_lattices X0)) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 \\
& (u1_struct_0 X0)) \Rightarrow ((r2_lattices X0 X1 X2) \Leftrightarrow ((k1_lattices X0 X1 \\
& X2 = k6_lattices X0) \wedge ((k1_lattices X0 X2 X1 = k6_lattices X0) \wedge ((\\
& k2_lattices X0 X1 X2 = k5_lattices X0) \wedge (k2_lattices X0 X2 X1 = k5_lattices \\
& X0)))))) \tag{4}
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l3_lattices X0) \Rightarrow (((\neg v2_struct_0 X0) \wedge (v15_lattices \\
& X0)) \Rightarrow ((\neg v2_struct_0 X0) \wedge ((v13_lattices X0) \wedge (v14_lattices X0)))) \tag{5}
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v15_lattices \\
& X0) \wedge ((v16_lattices X0) \wedge (l3_lattices X0)))))) \Rightarrow (\forall X1.((\\
& \neg v2_struct_0 X1) \wedge ((v10_lattices X1) \wedge ((v15_lattices X1) \wedge ((v16_lattices \\
& X1) \wedge (l3_lattices X1)))))) \Rightarrow ((g3_lattices (u1_struct_0 X0) (u2_lattices \\
& X0) (u1_lattices X0) = g3_lattices (u1_struct_0 X1) (u2_lattices \\
& X1) (u1_lattices X1)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. \\
& (m1_subset_1 X4 (u1_struct_0 X1)) \Rightarrow (\forall X5.(m1_subset_1 X5 \\
& (u1_struct_0 X1)) \Rightarrow (((X2 = X4) \wedge ((X3 = X5) \wedge (r2_lattices X0 X2 X3)) \Rightarrow \\
& (r2_lattices X1 X4 X5))))))))))
\end{aligned}$$