

t34_openlatt

(TMXdEnvefgrmjUWGpveU4uBgNVhTjU3X1ib)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $v1_lattice2 : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $r1_lattice4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_openlatt : \iota \Rightarrow \iota$ be given. Let $k17_openlatt : \iota \Rightarrow \iota$ be given. Let $k18_openlatt : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_filter_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_lattice4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v10_lattices \\
& X0) \wedge ((v1_lattice2 X0) \wedge (l3_lattices X0)))))) \Rightarrow (\forall X1. (m1_subset_1 \\
& X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 \\
& X0)) \Rightarrow (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 (k6_openlatt \\
& (k17_openlatt X0))) (k18_openlatt X0) (k4_filter_0 X0 X1 X2) = k4_filter_0 \\
& (k6_openlatt (k17_openlatt X0)) (k3_funct_2 (u1_struct_0 X0) \\
& (u1_struct_0 (k6_openlatt (k17_openlatt X0))) (k18_openlatt \\
& X0) X1) (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 (k6_openlatt \\
& (k17_openlatt X0))) (k18_openlatt X0) X2))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v10_lattices \\
& X0) \wedge ((v1_lattice2 X0) \wedge (l3_lattices X0)))))) \Rightarrow ((\neg v2_struct_0 \\
& (k17_openlatt X0)) \wedge ((v1_pre_topc (k17_openlatt X0)) \wedge (v2_pre_topc \\
& (k17_openlatt X0))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
& X0))) \Rightarrow ((\neg v2_struct_0 (k6_openlatt X0)) \wedge ((v10_lattices (k6_openlatt \\
& X0)) \wedge (l3_lattices (k6_openlatt X0))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v1_lattice2 X0) \wedge (l3_lattices X0)))))) \Rightarrow (m1_lattice4 (k18_openlatt X0) X0 (k6_openlatt (k17_openlatt X0))) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v1_lattice2 X0) \wedge (l3_lattices X0)))))) \Rightarrow ((v1_pre_topc (k17_openlatt X0)) \wedge (l1_pre_topc (k17_openlatt X0))) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v10_lattices X1) \wedge (l3_lattices X1)))) \Rightarrow (\forall X2.(m1_lattice4 X2 X0 X1) \Rightarrow ((r1_lattice4 X0 X1 X2) \Leftrightarrow \\ & (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X1) X2 (k4_filter_0 X0 X3 X4) = k4_filter_0 X1 (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X0) (u1_struct_0 X1) X2 X3) (k3_funct_2 (u1_struct_0 X0) (u1_struct_0 X1) X2 X4)))))) \end{aligned} \quad (6)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v1_lattice2 X0) \wedge (l3_lattices X0)))))) \Rightarrow (r1_lattice4 X0 (k6_openlatt (k17_openlatt X0)) (k18_openlatt X0))$$