

t22_conlat_2

(TMR3MBNdnShv7miYVvux5eyMLYPKjJiJR3B5)

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Let $v1_conlat_1 : \iota \Rightarrow o$ be given. Let $l1_conlat_1 : \iota \Rightarrow o$ be given. Let $r1_filter_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k11_conlat_1 : \iota \Rightarrow \iota$ be given. Let $k7_conlat_2 : \iota \Rightarrow \iota$ be given. Let $k1_lattice2 : \iota \Rightarrow \iota$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_conlat_2 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_lattices : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $v3_lattices : \iota \Rightarrow o$ be given. Let $m1_lattice4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_conlat_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (v3_funct_2 \\ (k9_conlat_2 X0) (u1_struct_0 (k1_lattice2 (k11_conlat_1 X0))) \\ (u1_struct_0 (k11_conlat_1 (k7_conlat_2 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v10_lattices X0) \wedge \\ (l3_lattices X0))) \wedge ((\neg v2_struct_0 X1) \wedge (v10_lattices X1) \wedge \\ (l3_lattices X1))) \Rightarrow ((r1_filter_1 X0 X1) \Rightarrow (r1_filter_1 X1 X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge (v10_lattices X0) \wedge (l3_lattices \\ X0)) \Rightarrow ((v3_lattices (k1_lattice2 X0)) \wedge (v10_lattices (k1_lattice2 \\ X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow ((\neg v2_struct_0 \\ (k11_conlat_1 X0)) \wedge (v3_lattices (k11_conlat_1 X0)) \wedge (v10_lattices \\ (k11_conlat_1 X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2_struct_0 X0) \wedge (l3_lattices X0)) \Rightarrow ((\neg v2_struct_0 \\ (k1_lattice2 X0)) \wedge (v3_lattices (k1_lattice2 X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (m1_lattice4 (k9_conlat_2 X0) (k1_lattice2 (k11_conlat_1 X0)) (k11_conlat_1 (k7_conlat_2 X0))) \quad (6)$$

Assume the following.

$$\forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow ((\neg v1_conlat_1 (k7_conlat_2 X0)) \wedge ((v2_conlat_1 (k7_conlat_2 X0)) \wedge (l1_conlat_1 (k7_conlat_2 X0)))) \quad (7)$$

Assume the following.

$$\forall X0.(l3_lattices X0) \Rightarrow ((v3_lattices (k1_lattice2 X0)) \wedge (l3_lattices (k1_lattice2 X0))) \quad (8)$$

Assume the following.

$$\forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow ((\neg v2_struct_0 (k11_conlat_1 X0)) \wedge ((v3_lattices (k11_conlat_1 X0)) \wedge (l3_lattices (k11_conlat_1 X0)))) \quad (9)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v10_lattices X1) \wedge (l3_lattices X1)))) \Rightarrow ((r1_filter_1 X0 X1) \Leftrightarrow (\exists X2.(m1_lattice4 X2 X0 X1) \wedge (v3_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1)))) \quad (10)$$

Theorem 1

$$\forall X0.((\neg v1_conlat_1 X0) \wedge (l1_conlat_1 X0)) \Rightarrow (r1_filter_1 (k11_conlat_1 (k7_conlat_2 X0)) (k1_lattice2 (k11_conlat_1 X0)))$$