

t9_boolealg (TMRd- HEEpGg8xJL1ScL1n8RCWgoycTBrBCQo)

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Let $v2_struct_0 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r3_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_lattices : \iota \Rightarrow \iota$ be given. Let $r1_boolealg : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_lattices : \iota \Rightarrow o$ be given. Let $l2_lattices : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v13_lattices X0) \wedge (l3_lattices X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (r3_lattices X0 (k5_lattices X0) X1)) \quad (1)$$

Assume the following.

$$\forall X0.(l3_lattices X0) \Rightarrow ((l1_lattices X0) \wedge (l2_lattices X0)) \quad (2)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l1_lattices X0)) \Rightarrow (m1_subset_1 (k5_lattices X0) (u1_struct_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge (l3_lattices X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_boolealg X0 X1 X2) \Leftrightarrow ((r3_lattices X0 X1 X2) \wedge (r3_lattices X0 X2 X1)))))) \quad (4)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0) \wedge ((v10_lattices X0) \wedge ((v13_lattices X0) \wedge (l3_lattices X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow ((r3_lattices X0 X1 (k5_lattices X0)) \Rightarrow (r1_boolealg X0 X1 (k5_lattices X0))))$$