

t5_heyting1

(TMJeoK23py87TjPLL2p8to2mUYV5RL3UrGq)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k12_normform : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_finsub_1 : \iota \Rightarrow \iota$ be given. Let $k7_normform : \iota \Rightarrow \iota$ be given. Let $k8_normform : \iota \Rightarrow \iota$ be given. Let $k3_heyting1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_lattices : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_lattices : \iota \Rightarrow \iota$ be given. Let $k9_normform : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_setwiseo : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_lattices : \iota \Rightarrow \iota$ be given. Let $k10_normform : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (m2_subset_1 X1 (k5_finsub_1 (k7_normform X0)) (k8_normform X0)) \Rightarrow (\forall X2. (r1_tarski X2 X1) \Rightarrow (X2 \in k8_normform X0)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (u1_struct_0 (k12_normform X0))) \Rightarrow (m2_subset_1 (k3_heyting1 X0 X1) (k5_finsub_1 (k7_normform X0)) (k8_normform X0)) \quad (3)$$

Assume the following.

$$\forall X0. (v3_lattices (k12_normform X0)) \wedge (l3_lattices (k12_normform X0)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X1 (u1_struct_0 (k12_normform X0))) \Rightarrow (k3_heyting1 X0 X1 = X1) \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v3_lattices X1) \wedge (l3_lattices X1)) \Rightarrow (\\
& (X1 = k12_normform X0) \Leftrightarrow ((u1_struct_0 X1 = k8_normform X0) \wedge (\forall X2. \\
& (m2_subset_1 X2 (k5_finsub_1 (k7_normform X0)) (k8_normform X0)) \Rightarrow \\
& (\forall X3. (m2_subset_1 X3 (k5_finsub_1 (k7_normform X0)) (k8_normform \\
& X0)) \Rightarrow ((k1_binop_1 (u2_lattices X1) X2 X3 = k9_normform X0 (k5_setwiseo \\
& (k7_normform X0) X2 X3)) \wedge (k1_binop_1 (u1_lattices X1) X2 X3 = k9_normform \\
& X0 (k10_normform X0 X2 X3))))))
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned}
& \forall X0. \forall X1. (m1_subset_1 X1 (u1_struct_0 (k12_normform \\
& X0))) \Rightarrow (\forall X2. (r1_tarski X2 X1) \Rightarrow (m1_subset_1 X2 (u1_struct_0 \\
& (k12_normform X0))))
\end{aligned}$$