

t39\_heyting3  
(TMTdbPsae5iaZVbzQzrbPkzmUvDyA3Dd6qo)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_heyting3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r3\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ & (k1\_heyting3 X0 X1))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ & (k1\_heyting3 X0 X1))) \Rightarrow ((r3\_orders\_2 (k1\_heyting3 X0 X1) X2 X3) \Leftrightarrow \\ & (\forall X4.\neg(X4 \in X2) \wedge (\forall X5.\neg(X5 \in X3) \wedge (r1\_tarski X5 X4)))))) \end{aligned} \quad (2)$$

Assume the following.

$$v1\_xboole\_0 k1\_xboole\_0 \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Leftrightarrow (\forall X1.\neg X1 \in X0) \quad (4)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 (u1\_struct\_0 (k1\_heyting3 k5\_numbers (k6\_domain\_1 k5\_numbers \\ & X0)))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k1\_heyting3 \\ & k5\_numbers (k6\_domain\_1 k5\_numbers X0)))) \Rightarrow (((r3\_orders\_2 (k1\_heyting3 \\ & k5\_numbers (k6\_domain\_1 k5\_numbers X0)) X1 X2) \wedge (X2 = k1\_xboole\_0)) \Rightarrow \\ & (X1 = k1\_xboole\_0)))) \end{aligned}$$