

t38_heyting3

(TMYjUDcinPNUJj2yYxS9Wfjskvqg6RC9W)

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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 $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(r1_tarski X0 k1_xboole_0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 (k1_heyting3 k5_numbers (k6_domain_1 k5_numbers \\ & X0)))) \Rightarrow ((k1_xboole_0 \in X1) \Rightarrow (X1 = k1_tarski k1_xboole_0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (u1_struct_0 \\ & (k1_heyting3 X0 X1))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\ & (k1_heyting3 X0 X1))) \Rightarrow ((r3_orders_2 (k1_heyting3 X0 X1) X2 X3) \Leftrightarrow \\ & (\forall X4.\neg(X4 \in X2) \wedge (\forall X5.\neg(X5 \in X3) \wedge (r1_tarski X5 X4)))) \end{aligned} \quad (3)$$

Assume the following.

$$k1_xboole_0 \in k1_tarski k1_xboole_0 \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (u1_struct_0 (k1_heyting3 k5_numbers (k6_domain_1 k5_numbers \\ & X0)))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k1_heyting3 \\ & k5_numbers (k6_domain_1 k5_numbers X0)))) \Rightarrow (((r3_orders_2 (k1_heyting3 \\ & k5_numbers (k6_domain_1 k5_numbers X0)) X1 X2) \wedge (X1 = k1_tarski \\ & k1_xboole_0)) \Rightarrow (X2 = k1_tarski k1_xboole_0))) \end{aligned}$$