

# t4\_heyting1 (TMTX- uju9SMX6XEeyK3hjAwDozX58TqVLmRp)

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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  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_normform : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k5\_finsub\_1 (k7\_normform X0))) \Rightarrow ((\forall X2. (m2\_subset\_1 X2 (k2\_zfmisc\_1 (k5\_finsub\_1 X0) (k5\_finsub\_1 X0)) (k7\_normform X0)) \Rightarrow (\forall X3. (m2\_subset\_1 X3 (k2\_zfmisc\_1 (k5\_finsub\_1 X0) (k5\_finsub\_1 X0)) (k7\_normform X0)) \Rightarrow (((X2 \in X1) \wedge ((X3 \in X1) \wedge (r1\_normform (k5\_finsub\_1 X0) (k5\_finsub\_1 X0) X2 X3))) \Rightarrow (X2 = X3)))) \Rightarrow (X1 \in k8\_normform X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2\_subset\_1 X1 (k2\_zfmisc\_1 (k5\_finsub\_1 X0) (k5\_finsub\_1 X0)) (k7\_normform X0)) \Rightarrow (\forall X2. (m2\_subset\_1 X2 (k2\_zfmisc\_1 (k5\_finsub\_1 X0) (k5\_finsub\_1 X0)) (k7\_normform X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (k5\_finsub\_1 (k7\_normform X0)) \Rightarrow (((X3 \in k8\_normform X0) \wedge ((X1 \in X3) \wedge ((X2 \in X3) \wedge (r1\_normform (k5\_finsub\_1 X0) (k5\_finsub\_1 X0) X1 X2)))) \Rightarrow (X1 = X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X1 (k5\_finsub\_1 X0)) \Rightarrow (\forall X2. (r1\_tarski X2 X1) \Rightarrow (m1\_subset\_1 X2 (k5\_finsub\_1 X0))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.(m2\_subset\_1 X2 X0 X1)\Leftrightarrow(m1\_subset\_1 X2 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0 (k8\_normform X0) \quad (7)$$

Assume the following.

$$\forall X0.m1\_subset\_1 (k8\_normform X0) (k1\_zfmisc\_1 (k5\_finsub\_1 (k7\_normform X0))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (9)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))\Rightarrow(v1\_xboole\_0 X1)) \quad (10)$$

**Theorem 1**

$$\forall X0.\forall X1.(m2\_subset\_1 X1 (k5\_finsub\_1 (k7\_normform X0)) (k8\_normform X0))\Rightarrow(\forall X2.(r1\_tarski X2 X1)\Rightarrow(X2 \in k8\_normform X0))$$