

# l5\_heyting1

(TMdxHRVEWiQ11SHHoAirN4ygEyfBfUsjxmk)

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Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_finsub\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_normform : \iota \Rightarrow \iota$  be given. Let  $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_normform : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k2\_setwiseo : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_normform : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2. (m2\_subset\_1 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X1 X0)) \Rightarrow (k6\_domain\_1 X0 X1 = k1\_tarski X1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X1 X0)) \Rightarrow (k2\_setwiseo X0 X1 = k1\_tarski X1) \quad (4)$$

Assume the following.

$$\forall X0. \neg v1\_xboole\_0 (k8\_normform X0) \quad (5)$$

Assume the following.

$$\forall X0. \neg v1\_xboole\_0 (k7\_normform X0) \quad (6)$$

Assume the following.

$$\forall X0. m1\_subset\_1 (k8\_normform X0) (k1\_zfmisc\_1 (k5\_finsub\_1 (k7\_normform X0))) \quad (7)$$

Assume the following.

$$\forall X0.m1\_subset\_1 (k7\_normform X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k5\_finsub\_1 X0) (k5\_finsub\_1 X0))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X1 X0)) \Rightarrow (m1\_subset\_1 (k2\_setwiseo X0 X1) (k5\_finsub\_1 X0)) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.k8\_normform X0 = \text{ReplSep} (\text{toset} (\lambda X1 : \iota.m1\_subset\_1 \\ X1 (k5\_finsub\_1 (k7\_normform X0)))) (\lambda X1 : \iota.\forall X2.( \\ m2\_subset\_1 X2 (k2\_zfmisc\_1 (k5\_finsub\_1 X0) (k5\_finsub\_1 X0)) \\ (k7\_normform X0)) \Rightarrow (\forall X3.(m2\_subset\_1 X3 (k2\_zfmisc\_1 ( \\ k5\_finsub\_1 X0) (k5\_finsub\_1 X0)) (k7\_normform X0)) \Rightarrow (((X2 \in X1) \wedge \\ ((X3 \in X1) \wedge (r1\_normform (k5\_finsub\_1 X0) (k5\_finsub\_1 X0) X2 X3)) \Rightarrow \\ (X2 = X3)))) (\lambda X1 : \iota.X1) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1\_tarski X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (11)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (v1\_xboole\_0 X1)) \quad (12)$$

**Theorem 1**

$$\forall X0.\forall X1.(m2\_subset\_1 X1 (k2\_zfmisc\_1 (k5\_finsub\_1 X0) (k5\_finsub\_1 X0)) (k7\_normform X0)) \Rightarrow (m2\_subset\_1 (k6\_domain\_1 (k7\_normform X0) X1) (k5\_finsub\_1 (k7\_normform X0)) (k8\_normform X0))$$