

t1_heyting2

(TMb7LemSXdU3CEgnWWZZS2vTZR7H5KxZ1vx)

October 27, 2020

Let $k1_substlat : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_funct_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((X3 \in k1_substlat X0 X1) \wedge (X2 \in X3)) \Rightarrow (v1_finset_1 X2) \quad (2)$$

Assume the following.

$$\forall X0. (v4_funct_1 X0) \Leftrightarrow (\forall X1. (X1 \in X0) \Rightarrow ((v1_relat_1 X1) \wedge (v1_funct_1 X1))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_substlat X0 X1)) \Rightarrow (v4_funct_1 X2) \quad (4)$$

Theorem 1

$$\forall X0. \forall X1. \forall X2. \forall X3. ((X3 \in k1_substlat X0 X1) \wedge (X2 \in X3)) \Rightarrow ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_finset_1 X2)))$$