

t7_heyting2

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Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_finsub_1 : \iota \Rightarrow \iota$ be given. Let $k4_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_heyting2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$v1_xboole_0 \ k1_xboole_0 \tag{1}$$

Assume the following.

$$\forall X0.(v1_xboole_0 \ X0) \Leftrightarrow (\forall X1. \neg X1 \in X0) \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (v1_finset_1 \ X1) \Rightarrow (\forall X2. (m1_subset_1 \\ X2 \ (k5_finsub_1 \ (k4_partfun1 \ X0 \ X1))) \Rightarrow (\forall X3. (X3 = k1_heyting2 \\ X0 \ X1 \ X2) \Leftrightarrow (\forall X4. (X4 \in X3) \Leftrightarrow (\exists X5. ((v1_relat_1 \ X5) \wedge \\ (v1_funct_1 \ X5) \wedge (v1_finset_1 \ X5)))) \wedge ((X5 \in X2) \wedge (X4 \in k9_xtuple_0 \\ X5)))))) \end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} \forall X0. \forall X1. (v1_finset_1 \ X1) \Rightarrow (\forall X2. (m1_subset_1 \\ X2 \ (k5_finsub_1 \ (k4_partfun1 \ X0 \ X1))) \Rightarrow ((X2 = k1_xboole_0) \Rightarrow (k1_heyting2 \\ X0 \ X1 \ X2 = k1_xboole_0))) \end{aligned}$$