

t11_heyting1
(TMK1ZviBtS14KxMQ3hW5LyFw7Z8jCCwVpz7)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_finsub_1 : \iota \Rightarrow \iota$ be given. Let $k7_normform : \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_heyting1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_heyting1 : \iota \Rightarrow \iota$ be given. Let $k9_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_setwiseo : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k8_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k8_subset_1 X0 X1 X2 = k3_xboole_0 X1 X2) \quad (1)$$

Assume the following.

$$\forall X0. m1_subset_1 (k7_normform X0) (k1_zfmisc_1 (k2_zfmisc_1 (k5_finsub_1 X0) (k5_finsub_1 X0))) \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.(m1_subset_1 X1 (k5_finsub_1 (k7_normform \\
& X0))) \Rightarrow (k6_heyting1 X0 X1 = k8_subset_1 (k2_zfmisc_1 (k5_finsub_1 \\
& X0) (k5_finsub_1 X0)) (k7_normform X0) (ReplSep (toset (\lambda X2 : \\
& \iota.m2_funct_2 X2 (k7_normform X0) (k1_heyting1 X0) (k9_funct_2 \\
& (k7_normform X0) (k1_heyting1 X0)))) (\lambda X2 : \iota.\forall X3. \\
& (m2_subset_1 X3 (k2_zfmisc_1 (k5_finsub_1 X0) (k5_finsub_1 X0)) \\
& (k7_normform X0))) \Rightarrow ((X3 \in X1) \Rightarrow (k3_funct_2 (k7_normform X0) (k1_heyting1 \\
& X0) X2 X3 \in k5_setwiseo X0 (k2_domain_1 (k5_finsub_1 X0) (k5_finsub_1 \\
& X0) X3) (k3_domain_1 (k5_finsub_1 X0) (k5_finsub_1 X0) X3)))) (\lambda X2 : \iota.k4_tarski \\
& (ReplSep (toset (\lambda X3 : \iota.m2_subset_1 \\
& X3 (k2_zfmisc_1 (k5_finsub_1 X0) (k5_finsub_1 X0)) (k7_normform \\
& X0))) (\lambda X3 : \iota.(k3_funct_2 (k7_normform X0) (k1_heyting1 \\
& X0) X2 X3 \in k3_domain_1 (k5_finsub_1 X0) (k5_finsub_1 X0) X3) \wedge (X3 \in \\
& X1)) (\lambda X3 : \iota.k3_funct_2 (k7_normform X0) (k1_heyting1 X0) \\
& X2 X3)) (ReplSep (toset (\lambda X3 : \iota.m2_subset_1 X3 (k2_zfmisc_1 \\
& (k5_finsub_1 X0) (k5_finsub_1 X0)) (k7_normform X0))) (\lambda X3 : \\
& \iota.(k3_funct_2 (k7_normform X0) (k1_heyting1 X0) X2 X3 \in k2_domain_1 \\
& (k5_finsub_1 X0) (k5_finsub_1 X0) X3) \wedge (X3 \in X1)) (\lambda X3 : \iota.k3_funct_2 \\
& (k7_normform X0) (k1_heyting1 X0) X2 X3))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k3_xboole_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski X0 X1 = k2_tarski X1 X0 \tag{6}$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k5_finsub_1 (k7_normform \\ & X0))) \Rightarrow (\forall X2. (m2_subset_1 X2 (k2_zfmisc_1 (k5_finsub_1 \\ & X0) (k5_finsub_1 X0)) (k7_normform X0)) \Rightarrow (\neg (X2 \in k6_heyting1 X0 \\ & X1) \wedge (\forall X3. (m2_funct_2 X3 (k7_normform X0) (k1_heyting1 \\ & X0) (k9_funct_2 (k7_normform X0) (k1_heyting1 X0)))) \Rightarrow (\neg (\forall X4. \\ & (m2_subset_1 X4 (k2_zfmisc_1 (k5_finsub_1 X0) (k5_finsub_1 X0)) \\ & (k7_normform X0)) \Rightarrow ((X4 \in X1) \Rightarrow (k3_funct_2 (k7_normform X0) (k1_heyting1 \\ & X0) X3 X4 \in k5_setwiseo X0 (k2_domain_1 (k5_finsub_1 X0) (k5_finsub_1 \\ & X0) X4) (k3_domain_1 (k5_finsub_1 X0) (k5_finsub_1 X0) X4)))))) \wedge \\ & (X2 = k4_tarski (ReplSep (toSet (\lambda X4 : \iota. m2_subset_1 X4 (k2_zfmisc_1 \\ & (k5_finsub_1 X0) (k5_finsub_1 X0)) (k7_normform X0))) (\lambda X4 : \\ & \iota. (k3_funct_2 (k7_normform X0) (k1_heyting1 X0) X3 X4 \in k3_domain_1 \\ & (k5_finsub_1 X0) (k5_finsub_1 X0) X4) \wedge (X4 \in X1)) (\lambda X4 : \iota. k3_funct_2 \\ & (k7_normform X0) (k1_heyting1 X0) X3 X4)) (ReplSep (toSet (\lambda X4 : \\ & \iota. m2_subset_1 X4 (k2_zfmisc_1 (k5_finsub_1 X0) (k5_finsub_1 \\ & X0)) (k7_normform X0))) (\lambda X4 : \iota. (k3_funct_2 (k7_normform \\ & X0) (k1_heyting1 X0) X3 X4 \in k2_domain_1 (k5_finsub_1 X0) (k5_finsub_1 \\ & X0) X4) \wedge (X4 \in X1)) (\lambda X4 : \iota. k3_funct_2 (k7_normform X0) (k1_heyting1 \\ & X0) X3 X4)))))) \end{aligned}$$