

t3_yellow_9

(TMaEkM1yY5RTbtc12dBRaze4B2LaFwLU3es)

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Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k7_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(l1_struct_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2.(m1_subset_1 X2 \\ (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((k3_subset_1 (u1_struct_0 \\ X0) X2 \in k7_setfam_1 (u1_struct_0 X0) X1) \Leftrightarrow (X2 \in X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_struct_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2.(r1_tarski X2 X1) \Rightarrow \\ (m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))) \Rightarrow (k7_setfam_1 X0 (k7_setfam_1 X0 X1) = X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \Rightarrow (k3_subset_1 X0 (k3_subset_1 X0 X1) = X1) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ X0))) \Rightarrow (m1_subset_1 (k7_setfam_1 X0 X1) (k1_zfmisc_1 (k1_zfmisc_1 \\ X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(m1_subset_1 (k3_subset_1 X0 X1) (k1_zfmisc_1 X0)) \quad (7)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 (k1_zfmisc_1 \\ &X0)))\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 \\ &X0)))\Rightarrow((X2 = k7_setfam_1 X0 X1)\Leftrightarrow(\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ &X0))\Rightarrow((X3 \in X2)\Leftrightarrow(k3_subset_1 X0 X3 \in X1)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (9)$$

Theorem 1

$$\begin{aligned} &\forall X0.(l1_struct_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ &(k1_zfmisc_1 (u1_struct_0 X0))))\Rightarrow(k7_setfam_1 (u1_struct_0 \\ &X0) X1 = ReplSep (toset (\lambda X2 : \iota.m1_subset_1 X2 (k1_zfmisc_1 \\ &(u1_struct_0 X0)))) (\lambda X2 : \iota.X2 \in X1) (\lambda X2 : \iota.k3_subset_1 \\ &(u1_struct_0 X0) X2))) \end{aligned}$$