

l1_topreala (TMYp- PxQpBJ7vvEhU9AbTtc2mgE281QEgMAK)

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Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k2_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_topmetr : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $u1_pre_topc : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k5_setfam_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$(v2_pre_topc\ k3_topmetr) \wedge (l1_pre_topc\ k3_topmetr) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \wedge \\ & ((v2_pre_topc\ X1) \wedge (l1_pre_topc\ X1))) \Rightarrow ((v1_pre_topc\ (k2_borsuk_1 \\ & X0\ X1)) \wedge ((v2_pre_topc\ (k2_borsuk_1\ X0\ X1)) \wedge (l1_pre_topc\ (k2_borsuk_1 \\ & X0\ X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v2_pre_topc\ X0) \wedge (l1_pre_topc\ X0)) \Rightarrow (\forall X1. \\ & ((v2_pre_topc\ X1) \wedge (l1_pre_topc\ X1)) \Rightarrow (\forall X2. ((v1_pre_topc \\ & X2) \wedge ((v2_pre_topc\ X2) \wedge (l1_pre_topc\ X2)))) \Rightarrow ((X2 = k2_borsuk_1 \\ & X0\ X1) \Leftrightarrow ((u1_struct_0\ X2 = k2_zfmisc_1\ (u1_struct_0\ X0)\ (u1_struct_0 \\ & X1)) \wedge (u1_pre_topc\ X2 = ReplSep\ (toset\ (\lambda X3 : \iota. m1_subset_1 \\ & X3\ (k1_zfmisc_1\ (k1_zfmisc_1\ (u1_struct_0\ X2))))))\ (\lambda X3 : \iota. \\ & r1_tarski\ X3\ (ReplSep2\ (toset\ (\lambda X4 : \iota. m1_subset_1\ X4\ (k1_zfmisc_1 \\ & (u1_struct_0\ X0))))\ (\lambda X4 : \iota. toset\ (\lambda X5 : \iota. m1_subset_1 \\ & X5\ (k1_zfmisc_1\ (u1_struct_0\ X1))))\ (\lambda X4 : \iota. \lambda X5 : \iota. \\ & (X4 \in u1_pre_topc\ X0) \wedge (X5 \in u1_pre_topc\ X1))\ (\lambda X4 : \iota. \lambda X5 : \\ & \iota. k8_mcart_1\ (u1_struct_0\ X0)\ (u1_struct_0\ X1)\ X4\ X5)))\ (\lambda X3 : \\ & \iota. k5_setfam_1\ (u1_struct_0\ X2)\ X3)))))) \end{aligned} \quad (3)$$

Theorem 1

$$u1_struct_0 (k2_borsuk_1 k3_topmetr k3_topmetr) = k2_zfmisc_1 \\ (u1_struct_0 k3_topmetr) (u1_struct_0 k3_topmetr)$$