

t11_borsuk_1

(TMQ5JZ7gYNKPoI7eMvHpJFREg6SNodBeDgt)

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Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ 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 $k2_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & ((v2_pre_topc X1) \wedge (l1_pre_topc X1)) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 (k2_borsuk_1 X0 X1)))) \Rightarrow (k7_borsuk_1 \\ & X0 X1 X2 = ReplSep2 (toset (\lambda X3 : \iota. m1_subset_1 X3 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))) (\lambda X3 : \iota. toset (\lambda X4 : \iota. m1_subset_1 \\ & X4 (k1_zfmisc_1 (u1_struct_0 X1)))) (\lambda X3 : \iota. \lambda X4 : \iota. \\ & (r1_tarski (k3_borsuk_1 X0 X1 X3 X4) X2) \wedge ((v3_pre_topc X3 X0) \wedge \\ & (v3_pre_topc X4 X1))) (\lambda X3 : \iota. \lambda X4 : \iota. k3_borsuk_1 X0 X1 \\ & X3 X4)))) \quad (3) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & ((v2_pre_topc X1) \wedge (l1_pre_topc X1)) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 (k2_borsuk_1 X0 X1)))) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 (k2_borsuk_1 X0 X1)))) \Rightarrow \\ & ((r1_tarski X2 X3) \Rightarrow (r1_tarski (k7_borsuk_1 X0 X1 X2) (k7_borsuk_1 \\ & X0 X1 X3)))))) \end{aligned}$$