

t9_borsuk_6

(TMaCzHJDWc6TccZdYk4XfBDKBv5e1cRezZy)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_topmetr : \iota$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k8_mcart_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_compts_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v2_connsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $k3_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_borsuk_1 : \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v3_topmetr : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 k5_topmetr)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 k5_topmetr)) \Rightarrow ((r1_xreal_0 X0 X1) \Rightarrow \\ & ((\neg v1_xboole_0 (k1_rcomp_1 X0 X1)) \wedge ((v2_connsp_1 (k1_rcomp_1 \\ & X0 X1) k5_topmetr) \wedge ((v2_compts_1 (k1_rcomp_1 X0 X1) k5_topmetr) \wedge \\ & (m1_subset_1 (k1_rcomp_1 X0 X1) (k1_zfmisc_1 (u1_struct_0 k5_topmetr)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2_pre_topc X0) \wedge (l1_pre_topc X0)) \Rightarrow (\forall X1. \\ & ((v2_pre_topc X1) \wedge (l1_pre_topc X1)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 (k1_zfmisc_1 (u1_struct_0 X1))) \Rightarrow (((v2_compts_1 X2 X0) \wedge (v2_compts_1 \\ & X3 X1)) \Rightarrow ((v2_compts_1 (k3_borsuk_1 X0 X1 X2 X3) (k2_borsuk_1 X0 \\ & X1)) \wedge (m1_subset_1 (k3_borsuk_1 X0 X1 X2 X3) (k1_zfmisc_1 (u1_struct_0 \\ & (k2_borsuk_1 X0 X1)))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 (u1_struct_0 k5_topmetr)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 k5_topmetr)) \Rightarrow (m1_subset_1 (k1_rcomp_1 \\ & X0 X1) (k1_zfmisc_1 (u1_struct_0 k5_topmetr)))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 (k1_zfmisc_1 X0))\wedge(m1_subset_1 X3 (k1_zfmisc_1 X1)))\Rightarrow(k8_mcart_1 X0 X1 X2 X3 = k2_zfmisc_1 X2 X3) \quad (4)$$

Assume the following.

$$k5_topmetr = k17_borsuk_1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v2_pre_topc X0)\wedge(l1_pre_topc X0))\wedge(((v2_pre_topc X1)\wedge(l1_pre_topc X1))\wedge((m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X1))))))\Rightarrow(k3_borsuk_1 X0 X1 X2 X3 = k2_zfmisc_1 X2 X3) \quad (6)$$

Assume the following.

$$(\neg v2_struct_0 k17_borsuk_1)\wedge((v1_pre_topc k17_borsuk_1)\wedge(v2_pre_topc k17_borsuk_1)) \quad (7)$$

Assume the following.

$$\forall X0.((v3_topmetr X0)\wedge(l1_struct_0 X0))\Rightarrow(v3_membered (u1_struct_0 X0)) \quad (8)$$

Assume the following.

$$v3_topmetr k17_borsuk_1 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge(\neg v1_xboole_0 X1))\Rightarrow(\neg v1_xboole_0 (k2_zfmisc_1 X0 X1)) \quad (10)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(l1_struct_0 X0) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v2_pre_topc X0)\wedge(l1_pre_topc X0))\wedge(((v2_pre_topc X1)\wedge(l1_pre_topc X1))\wedge((m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X1))))))\Rightarrow(m1_subset_1 (k3_borsuk_1 X0 X1 X2 X3) (k1_zfmisc_1 (u1_struct_0 (k2_borsuk_1 X0 X1)))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(m1_subset_1 (k1_rcomp_1 X0 X1) (k1_zfmisc_1 k1_numbers)) \quad (13)$$

Assume the following.

$$l1_pre_topc \ k17_borsuk_1 \tag{14}$$

Assume the following.

$$\forall X0.(v3_membered \ X0) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ X0) \Rightarrow (v1_xreal_0 \ X1)) \tag{15}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 \ X0 \ (u1_struct_0 \ k5_topmetr)) \Rightarrow (\forall X1. \\ & (m1_subset_1 \ X1 \ (u1_struct_0 \ k5_topmetr)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 \ (u1_struct_0 \ k5_topmetr)) \Rightarrow (\forall X3.(m1_subset_1 \ X3 \ (u1_struct_0 \\ & k5_topmetr)) \Rightarrow (((r1_xxreal_0 \ X0 \ X1) \wedge (r1_xxreal_0 \ X2 \ X3)) \Rightarrow ((\neg \\ & v1_xboole_0 \ (k8_mcart_1 \ k1_numbers \ k1_numbers \ (k1_rcomp_1 \ X0 \\ & X1) \ (k1_rcomp_1 \ X2 \ X3))) \wedge ((v2_compts_1 \ (k8_mcart_1 \ k1_numbers \\ & k1_numbers \ (k1_rcomp_1 \ X0 \ X1) \ (k1_rcomp_1 \ X2 \ X3)) \ (k2_borsuk_1 \\ & k5_topmetr \ k5_topmetr)) \wedge (m1_subset_1 \ (k8_mcart_1 \ k1_numbers \\ & k1_numbers \ (k1_rcomp_1 \ X0 \ X1) \ (k1_rcomp_1 \ X2 \ X3)) \ (k1_zfmisc_1 \\ & (u1_struct_0 \ (k2_borsuk_1 \ k5_topmetr \ k5_topmetr)))))))))) \end{aligned}$$