

t13_borsuk_4

(TME nYFTFMFHx2TRP4A3ADff4vjy9aaEZE rA)

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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 $k5_topmetr : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k2_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_measure6 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k3_topmetr : \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k17_borsuk_1 : \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 k5_topmetr))) \Rightarrow \\ (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow ((X0 = \\ k2_rcomp_1 X1 X2) \Rightarrow ((r1_xxreal_0 X2 X1) \vee (r1_tarski (k1_rcomp_1 \\ X1 X2) (u1_struct_0 k5_topmetr)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Rightarrow (k3_xboole_0 X0 X1 = X0) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((X0 \neq X1) \Leftrightarrow (k6_measure6 (k2_rcomp_1 X0 X1) = k1_rcomp_1 X0 X1))) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (\forall X1. \\ (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 k3_topmetr))) \Rightarrow ((X0 = \\ X1) \Rightarrow (k6_measure6 X0 = k2_pre_topc k3_topmetr X1))) \end{aligned} \quad (5)$$

Assume the following.

$$u1_struct_0 \ k3_topmetr = k1_numbers \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_pre_topc \ X0) \Rightarrow & (\forall X1.(m1_pre_topc \ X1 \ X0) \Rightarrow \\ & (\forall X2.(m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (u1_struct_0 \ X0))) \Rightarrow \\ & (\forall X3.(m1_subset_1 \ X3 \ (k1_zfmisc_1 \ (u1_struct_0 \ X1))) \Rightarrow \\ & ((X2 = X3) \Rightarrow (k2_pre_topc \ X1 \ X3 = k9_subset_1 \ (u1_struct_0 \ X1) \ (k2_pre_topc \\ & \ X0 \ X2) \ (k2_struct_0 \ X1)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 \ X0) \wedge (v1_xxreal_0 \ X1)) \Rightarrow (r1_xxreal_0 \ X0 \ X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski \ X0 \ X0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 \ X2 \ (k1_zfmisc_1 \ X0)) \Rightarrow (k9_subset_1 \ X0 \ X1 \ X2 = k3_xboole_0 \ X1 \ X2) \quad (10)$$

Assume the following.

$$k5_topmetr = k17_borsuk_1 \quad (11)$$

Assume the following.

$$\forall X0.(l1_pre_topc \ X0) \Rightarrow (l1_struct_0 \ X0) \quad (12)$$

Assume the following.

$$m1_pre_topc \ k5_topmetr \ k3_topmetr \quad (13)$$

Assume the following.

$$(v2_pre_topc \ k3_topmetr) \wedge (l1_pre_topc \ k3_topmetr) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 \ X0) \wedge (v1_xxreal_0 \ X1)) \Rightarrow (m1_subset_1 \ (k2_rcomp_1 \ X0 \ X1) \ (k1_zfmisc_1 \ k1_numbers)) \quad (15)$$

Assume the following.

$$l1_pre_topc \ k17_borsuk_1 \quad (16)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0) \Rightarrow (k2_struct_0 X0 = u1_struct_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (18)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (19)$$

Theorem 1

$$\begin{aligned} &\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 (u1_struct_0 k5_topmetr))) \Rightarrow \\ &(\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow ((X0 = \\ &k2_rcomp_1 X1 X2) \Rightarrow ((r1_xxreal_0 X2 X1) \vee (k2_pre_topc k5_topmetr \\ &X0 = k1_rcomp_1 X1 X2)))))) \end{aligned}$$