

## t27\_borsuk\_4

(TMX3cPbzKNL7VdcqbkAsYF16CJZTPjypLYS)

October 27, 2020

Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k5\_topmetr : \iota$  be given. Let  $v2\_rcomp\_1 : \iota \Rightarrow o$  be given. Let  $v4\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $m1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_topmetr : \iota$  be given. Let  $v1\_borsuk\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ & (m1\_pre\_topc X1 X0) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X1))) \Rightarrow (((v4\_pre\_topc X2 X0) \wedge (r1\_tarski X2 (u1\_struct\_0 \\ & X1)) \wedge ((r1\_tarski X3 X2) \wedge (X3 = X4))) \Rightarrow ((v4\_pre\_topc X4 X1) \Leftrightarrow (v4\_pre\_topc \\ & X3 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_numbers)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 k3\_topmetr))) \Rightarrow ((X0 = \\ & X1) \Rightarrow ((v2\_rcomp\_1 X0) \Leftrightarrow (v4\_pre\_topc X1 k3\_topmetr)))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X2)) \Rightarrow (r1\_tarski X0 X2) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_pre\_topc X0) \Rightarrow (\forall X1.(m1\_pre\_topc X1 X0) \Rightarrow (r1\_tarski (u1\_struct\_0 X1) (u1\_struct\_0 X0))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarSKI X0 X0 \quad (6)$$

Assume the following.

$$(v1\_borsuk\_1 k5\_topmetr k3\_topmetr)\wedge(m1\_pre\_topc k5\_topmetr k3\_topmetr) \quad (7)$$

Assume the following.

$$m1\_pre\_topc k5\_topmetr k3\_topmetr \quad (8)$$

Assume the following.

$$(v2\_pre\_topc k3\_topmetr)\wedge(l1\_pre\_topc k3\_topmetr) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((v2\_pre\_topc X0)\wedge(l1\_pre\_topc X0))\Rightarrow(\forall X1. \\ (m1\_pre\_topc X1 X0)\Rightarrow((v1\_borsuk\_1 X1 X0)\Leftrightarrow(\forall X2.(m1\_subset\_1 \\ X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))\Rightarrow((X2 = u1\_struct\_0 X1)\Rightarrow(v4\_pre\_topc \\ X2 X0)))) \end{aligned} \quad (10)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_numbers))\Rightarrow(\forall X1. \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 k5\_topmetr)))\Rightarrow((X0 = \\ X1)\Rightarrow((v2\_rcomp\_1 X0)\Leftrightarrow(v4\_pre\_topc X1 k5\_topmetr)))) \end{aligned}$$