

## t46\_borsuk\_6

(TMQriF1caE4VqNNGgCzjkgJKvpRkpWJjb6D)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v1\_borsuk\_2 : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_topmetr : \iota$  be given. Let  $v5\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $r4\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_borsuk\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_borsuk\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\
 & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_borsuk\_2 X3 \\
 & X0 X1 X2) \Rightarrow (\forall X4. ((v1\_funct\_1 X4) \wedge ((v1\_funct\_2 X4 (u1\_struct\_0 \\
 & k5\_topmetr) (u1\_struct\_0 k5\_topmetr)) \wedge ((v5\_pre\_topc X4 k5\_topmetr \\
 & k5\_topmetr) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\
 & k5\_topmetr) (u1\_struct\_0 k5\_topmetr)))))) \Rightarrow (((k1\_funct\_1 X4 \\
 & k6\_numbers = k6\_numbers) \wedge ((k1\_funct\_1 X4 np\_1 = np\_1) \wedge (r1\_borsuk\_6 \\
 & X0 X1 X2))) \Rightarrow (r3\_borsuk\_2 X0 X1 X2 (k2\_borsuk\_6 X0 X1 X2 X3 X4) X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. (((\neg v2\_struct\_0 \\
 & X0) \wedge ((v2\_pre\_topc X0) \wedge ((v1\_borsuk\_2 X0) \wedge (l1\_pre\_topc X0)))) \wedge \\
 & ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge ((m1\_subset\_1 X2 (u1\_struct\_0 \\
 & X0)) \wedge ((m1\_borsuk\_2 X3 X0 X1 X2) \wedge (m1\_borsuk\_2 X4 X0 X1 X2)))) \Rightarrow ( \\
 & (r4\_borsuk\_2 X0 X1 X2 X3 X4) \Leftrightarrow (r3\_borsuk\_2 X0 X1 X2 X3 X4))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0)\wedge((v2\_pre\_topc \\ & X0)\wedge(l1\_pre\_topc X0)))\wedge((m1\_subset\_1 X1 (u1\_struct\_0 X0))\wedge( \\ & m1\_subset\_1 X2 (u1\_struct\_0 X0))))\Rightarrow((r1\_borsuk\_6 X0 X1 X2)\Leftrightarrow(r1\_borsuk\_2 \\ & X0 X1 X2)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((\neg v2\_struct\_0 \\ & X0)\wedge((v2\_pre\_topc X0)\wedge(l1\_pre\_topc X0)))\wedge((m1\_subset\_1 X1 ( \\ & u1\_struct\_0 X0))\wedge((m1\_subset\_1 X2 (u1\_struct\_0 X0))\wedge((m1\_borsuk\_2 \\ & X3 X0 X1 X2)\wedge((v1\_funct\_1 X4)\wedge((v1\_funct\_2 X4 (u1\_struct\_0 k5\_topmetr) \\ & (u1\_struct\_0 k5\_topmetr))\wedge((v5\_pre\_topc X4 k5\_topmetr k5\_topmetr)\wedge \\ & (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 k5\_topmetr) \\ & (u1\_struct\_0 k5\_topmetr))))))))))\Rightarrow(m1\_borsuk\_2 (k2\_borsuk\_6 \\ & X0 X1 X2 X3 X4) X0 X1 X2) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_pre\_topc X0)\Rightarrow((v1\_borsuk\_2 X0)\Leftrightarrow(\forall X1.( \\ & m1\_subset\_1 X1 (u1\_struct\_0 X0))\Rightarrow(\forall X2.(m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0))\Rightarrow(r1\_borsuk\_2 X0 X1 X2)))) \end{aligned} \quad (5)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0)\wedge((v2\_pre\_topc X0)\wedge((v1\_borsuk\_2 \\ & X0)\wedge(l1\_pre\_topc X0))))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0))\Rightarrow(\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0))\Rightarrow(\forall X3. \\ & (m1\_borsuk\_2 X3 X0 X1 X2)\Rightarrow(\forall X4.((v1\_funct\_1 X4)\wedge((v1\_funct\_2 \\ & X4 (u1\_struct\_0 k5\_topmetr) (u1\_struct\_0 k5\_topmetr))\wedge((v5\_pre\_topc \\ & X4 k5\_topmetr k5\_topmetr)\wedge(m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (u1\_struct\_0 k5\_topmetr) (u1\_struct\_0 k5\_topmetr))))))\Rightarrow(( \\ & (k1\_funct\_1 X4 k6\_numbers = k6\_numbers)\wedge(k1\_funct\_1 X4 np\_1 = \\ & np\_1))\Rightarrow(r4\_borsuk\_2 X0 X1 X2 (k2\_borsuk\_6 X0 X1 X2 X3 X4) X3)))))) \end{aligned}$$