

## t44\_borsuk\_6

(TMZvA3XekM9bcwDT1rjDy7ygqNubne7iDJy)

October 27, 2020

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  $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_topmetr : \iota$  be given. Let  $k2\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_borsuk\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((r1\_borsuk\_6 X0 X1 X2) \Rightarrow (\forall X3. \\ & (m1\_borsuk\_2 X3 X0 X1 X2) \Rightarrow (r2\_funct\_2 (u1\_struct\_0 k5\_topmetr) \\ & (u1\_struct\_0 X0) X3 (k2\_borsuk\_2 X0 X2 X1 (k2\_borsuk\_2 X0 X1 X2 X3)))))) \\ & (1) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc \\ & X0) \wedge (l1\_pre\_topc X0))) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge ( \\ & m1\_subset\_1 X2 (u1\_struct\_0 X0)))) \Rightarrow ((r1\_borsuk\_6 X0 X1 X2) \Leftrightarrow (r1\_borsuk\_2 \\ & X0 X1 X2)) \\ & (2) \end{aligned}$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_pre\_topc X0) \Rightarrow ((v1\_borsuk\_2 X0) \Leftrightarrow (\forall X1.( \\ & m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0)) \Rightarrow (r1\_borsuk\_2 X0 X1 X2)))) \\ & (3) \end{aligned}$$

### Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge ((v1\_borsuk\_2 \\ & X0) \wedge (l1\_pre\_topc X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\ & (m1\_borsuk\_2 X3 X0 X1 X2) \Rightarrow (r2\_funct\_2 (u1\_struct\_0 k5\_topmetr) \\ & (u1\_struct\_0 X0) X3 (k2\_borsuk\_2 X0 X2 X1 (k2\_borsuk\_2 X0 X1 X2 X3)))))) \end{aligned}$$