

t82\_borsuk\_6  
(TMNRUqh68USZv6k4vrAcCqnenbc29ktfwyA)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_funct\_1 : \iota \Rightarrow o$  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  $k1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_topmetr : \iota$  be given. Let  $k2\_borsuk\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_borsuk\_6 : \iota$  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  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\
 & \quad X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\
 & \quad (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_borsuk\_2 X3 \\
 & \quad X0 X1 X2) \Rightarrow (\forall X4. ((v3\_funct\_1 X4) \wedge (m1\_borsuk\_2 X4 X0 X1 X1)) \Rightarrow \\
 & \quad ((r1\_borsuk\_6 X0 X1 X2) \Rightarrow (r2\_funct\_2 (u1\_struct\_0 k5\_topmetr) \\
 & \quad (u1\_struct\_0 X0) (k2\_borsuk\_6 X0 X1 X2 X3 k4\_borsuk\_6) (k1\_borsuk\_2 \\
 & \quad \quad X0 X1 X1 X2 X4 X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$(k1\_funct\_1 k4\_borsuk\_6 k6\_numbers = k6\_numbers) \wedge (k1\_funct\_1 k4\_borsuk\_6 np\_1 = np\_1) \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\
& X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\
& (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_borsuk\_2 X3 \\
& X0 X1 X2) \Rightarrow (\forall X4.((v1\_funct\_1 X4) \wedge ((v1\_funct\_2 X4 (u1\_struct\_0 \\
& k5\_topmetr) (u1\_struct\_0 k5\_topmetr)) \wedge ((v5\_pre\_topc X4 k5\_topmetr \\
& k5\_topmetr) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\
& k5\_topmetr) (u1\_struct\_0 k5\_topmetr)))))) \Rightarrow (((k1\_funct\_1 X4 \\
& k6\_numbers = k6\_numbers) \wedge ((k1\_funct\_1 X4 np\_1 = np\_1) \wedge (r1\_borsuk\_6 \\
& X0 X1 X2))) \Rightarrow (r3\_borsuk\_2 X0 X1 X2 (k2\_borsuk\_6 X0 X1 X2 X3 X4) X3))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1 X2) \wedge \\
& ((v1\_funct\_2 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& X0 X1)))))) \wedge ((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 X0 X1) \wedge (m1\_subset\_1 \\
& X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))) \Rightarrow ((r2\_funct\_2 X0 X1 X2 \\
& X3) \Leftrightarrow (X2 = X3))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& (v1\_funct\_1 k4\_borsuk\_6) \wedge ((v1\_funct\_2 k4\_borsuk\_6 (u1\_struct\_0 \\
& k5\_topmetr) (u1\_struct\_0 k5\_topmetr)) \wedge (v5\_pre\_topc k4\_borsuk\_6 \\
& k5\_topmetr k5\_topmetr))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.((l1\_pre\_topc X0) \wedge ((m1\_subset\_1 \\
& X1 (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 X0)))) \Rightarrow (\forall X3. \\
& (m1\_borsuk\_2 X3 X0 X1 X2) \Rightarrow ((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 (u1\_struct\_0 \\
& k5\_topmetr) (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 ( \\
& k2\_zfmisc\_1 (u1\_struct\_0 k5\_topmetr) (u1\_struct\_0 X0))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& (v1\_funct\_1 k4\_borsuk\_6) \wedge ((v1\_funct\_2 k4\_borsuk\_6 (u1\_struct\_0 \\
& k5\_topmetr) (u1\_struct\_0 k5\_topmetr)) \wedge (m1\_subset\_1 k4\_borsuk\_6 \\
& (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 k5\_topmetr) (u1\_struct\_0 \\
& k5\_topmetr))))))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((\neg v2\_struct\_0 \\
& X0)\wedge((v2\_pre\_topc X0)\wedge(l1\_pre\_topc X0))\wedge((m1\_subset\_1 X1 ( \\
& u1\_struct\_0 X0))\wedge((m1\_subset\_1 X2 (u1\_struct\_0 X0))\wedge((m1\_borsuk\_2 \\
& X3 X0 X1 X2)\wedge((v1\_funct\_1 X4)\wedge((v1\_funct\_2 X4 (u1\_struct\_0 k5\_topmetr) \\
& (u1\_struct\_0 k5\_topmetr))\wedge((v5\_pre\_topc X4 k5\_topmetr k5\_topmetr)\wedge \\
& (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 k5\_topmetr) \\
& (u1\_struct\_0 k5\_topmetr))))))))))\Rightarrow(m1\_borsuk\_2 (k2\_borsuk\_6 \\
& X0 X1 X2 X3 X4) X0 X1 X2)
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\
& (((\neg v2\_struct\_0 X0)\wedge((v2\_pre\_topc X0)\wedge(l1\_pre\_topc X0))\wedge( \\
& (m1\_subset\_1 X1 (u1\_struct\_0 X0))\wedge((m1\_subset\_1 X2 (u1\_struct\_0 \\
& X0))\wedge((m1\_subset\_1 X3 (u1\_struct\_0 X0))\wedge((m1\_borsuk\_2 X4 X0 X1 \\
& X2)\wedge(m1\_borsuk\_2 X5 X0 X2 X3))))))\Rightarrow(m1\_borsuk\_2 (k1\_borsuk\_2 \\
& X0 X1 X2 X3 X4 X5) X0 X1 X3)
\end{aligned} \tag{9}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0)\wedge((v2\_pre\_topc X0)\wedge(l1\_pre\_topc \\
& X0)))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0))\Rightarrow(\forall X2. \\
& (m1\_subset\_1 X2 (u1\_struct\_0 X0))\Rightarrow(\forall X3.(m1\_borsuk\_2 X3 \\
& X0 X1 X2)\Rightarrow(\forall X4.((v3\_funct\_1 X4)\wedge(m1\_borsuk\_2 X4 X0 X1 X1))\Rightarrow \\
& ((r1\_borsuk\_6 X0 X1 X2)\Rightarrow(r3\_borsuk\_2 X0 X1 X2 (k1\_borsuk\_2 X0 X1 \\
& X1 X2 X4 X3) X3))))))
\end{aligned}$$