

## t74\_borsuk\_6

(TMWovUh6Ceic9UoZ1k6i6kSF9ETz6f7Kt6Z)

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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  $r4\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_borsuk\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_borsuk\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\
 & \quad X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\
 & \quad (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 \\
 & \quad (u1\_struct\_0 X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow \\
 & \quad (\forall X5.(m1\_borsuk\_2 X5 X0 X1 X2)) \Rightarrow (\forall X6.(m1\_borsuk\_2 \\
 & \quad X6 X0 X2 X3)) \Rightarrow (\forall X7.(m1\_borsuk\_2 X7 X0 X3 X4)) \Rightarrow (((r1\_borsuk\_6 \\
 & \quad X0 X1 X2) \wedge ((r1\_borsuk\_6 X0 X2 X3) \wedge (r1\_borsuk\_6 X0 X3 X4))) \Rightarrow (r3\_borsuk\_2 \\
 & \quad X0 X1 X4 (k1\_borsuk\_2 X0 X1 X3 X4 (k1\_borsuk\_2 X0 X1 X2 X3 X5 X6) X7) ( \\
 & \quad k1\_borsuk\_2 X0 X1 X2 X4 X5 (k1\_borsuk\_2 X0 X2 X3 X4 X6 X7))))))))) \\
 & \tag{1}
 \end{aligned}$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\
& (((\neg v2\_struct\_0 X0)\wedge((v2\_pre\_topc X0)\wedge(l1\_pre\_topc X0)))\wedge \\
& (m1\_subset\_1 X1 (u1\_struct\_0 X0))\wedge((m1\_subset\_1 X2 (u1\_struct\_0 \\
& X0))\wedge((m1\_subset\_1 X3 (u1\_struct\_0 X0))\wedge((m1\_borsuk\_2 X4 X0 X1 \\
& X2)\wedge(m1\_borsuk\_2 X5 X0 X2 X3))))))\Rightarrow(m1\_borsuk\_2 (k1\_borsuk\_2 \\
& X0 X1 X2 X3 X4 X5) X0 X1 X3)
\end{aligned} \tag{4}$$

Assume the following.

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

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0)\wedge((v2\_pre\_topc X0)\wedge((v1\_borsuk\_2 \\
& X0)\wedge(l1\_pre\_topc X0))))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
& X0))\Rightarrow(\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0))\Rightarrow(\forall X3. \\
& (m1\_subset\_1 X3 (u1\_struct\_0 X0))\Rightarrow(\forall X4.(m1\_subset\_1 X4 \\
& (u1\_struct\_0 X0))\Rightarrow(\forall X5.(m1\_borsuk\_2 X5 X0 X1 X2)\Rightarrow(\forall X6. \\
& (m1\_borsuk\_2 X6 X0 X2 X3)\Rightarrow(\forall X7.(m1\_borsuk\_2 X7 X0 X3 X4)\Rightarrow \\
& (r4\_borsuk\_2 X0 X1 X4 (k1\_borsuk\_2 X0 X1 X3 X4 (k1\_borsuk\_2 X0 X1 X2 \\
& X3 X5 X6) X7) (k1\_borsuk\_2 X0 X1 X2 X4 X5 (k1\_borsuk\_2 X0 X2 X3 X4 X6 X7))))))))))
\end{aligned}$$