

t81\_borsuk\_6  
(TMTRSC7DjEHqCGq1yNkDYVjKr56LS54cndh)

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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  $v3\_funct\_1 : \iota \Rightarrow o$  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.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_borsuk\_2 X3 \\ & X0 X1 X2) \Rightarrow (\forall X4.((v3\_funct\_1 X4) \wedge (m1\_borsuk\_2 X4 X0 X2 X2)) \Rightarrow \\ & ((r1\_borsuk\_6 X0 X1 X2) \Rightarrow (r3\_borsuk\_2 X0 X1 X2 (k1\_borsuk\_2 X0 X1 \\ & X2 X2 X3 X4) X3)))))) \end{aligned} \tag{1}$$

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.

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

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**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0)\wedge(v2\_pre\_topc X0)\wedge((v1\_borsuk\_2 \\
& X0)\wedge(l1\_pre\_topc X0)))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
& X0))\Rightarrow(\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0))\Rightarrow(\forall X3. \\
& (m1\_borsuk\_2 X3 X0 X1 X2)\Rightarrow(\forall X4.((v3\_funct\_1 X4)\wedge(m1\_borsuk\_2 \\
& X4 X0 X2 X2))\Rightarrow(r4\_borsuk\_2 X0 X1 X2 (k1\_borsuk\_2 X0 X1 X2 X2 X3 X4) X3))))))
\end{aligned}$$