

t76_borsuk_6

(TMPe5WqcQY7ZZHSW44w5RJuracT6ffDue5T)

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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.

$$\begin{aligned}
 & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\
 & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
 & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
 & (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_borsuk_2 X4 X0 X1 X2) \Rightarrow (\forall X5. \\
 & (m1_borsuk_2 X5 X0 X1 X2) \Rightarrow (\forall X6.(m1_borsuk_2 X6 X0 X2 X3) \Rightarrow \\
 & (\forall X7.(m1_borsuk_2 X7 X0 X2 X3) \Rightarrow (((r1_borsuk_6 X0 X1 X2) \wedge \\
 & ((r1_borsuk_6 X0 X2 X3) \wedge (r3_borsuk_2 X0 X1 X2 X4 X5) \wedge (r3_borsuk_2 \\
 & X0 X2 X3 X6 X7)))) \Rightarrow (r3_borsuk_2 X0 X1 X3 (k1_borsuk_2 X0 X1 X2 X3 X4 \\
 & X6) (k1_borsuk_2 X0 X1 X2 X3 X5 X7)))))))))
 \end{aligned} \tag{1}$$

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

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge((v1_borsuk_2 \\
& X0)\wedge(l1_pre_topc X0))))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\forall X3. \\
& (m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(\forall X4.(m1_borsuk_2 X4 \\
& X0 X1 X2)\Rightarrow(\forall X5.(m1_borsuk_2 X5 X0 X1 X2)\Rightarrow(\forall X6.(m1_borsuk_2 \\
& X6 X0 X2 X3)\Rightarrow(\forall X7.(m1_borsuk_2 X7 X0 X2 X3)\Rightarrow(((r4_borsuk_2 \\
& X0 X1 X2 X4 X5)\wedge(r4_borsuk_2 X0 X2 X3 X6 X7))\Rightarrow(r4_borsuk_2 X0 X1 X3 \\
& (k1_borsuk_2 X0 X1 X2 X3 X4 X6) (k1_borsuk_2 X0 X1 X2 X3 X5 X7))))))))))
\end{aligned}$$