

t83_borsuk_6 (TMN-
frKCbP8D4Ckp2iMoQ82X1PXWN9APa61U)

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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.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_borsuk_2 X3 \\ & X0 X1 X2) \Rightarrow (\forall X4.((v3_funct_1 X4) \wedge (m1_borsuk_2 X4 X0 X1 X1)) \Rightarrow \\ & ((r1_borsuk_6 X0 X1 X2) \Rightarrow (r3_borsuk_2 X0 X1 X2 (k1_borsuk_2 X0 X1 \\ & X1 X2 X4 X3) X3)))))) \end{aligned} \tag{1}$$

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

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0)\wedge((v2_pre_topc X0)\wedge((v1_borsuk_2 \\
& X0)\wedge(l1_pre_topc X0))))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\forall X3. \\
& (m1_borsuk_2 X3 X0 X1 X2)\Rightarrow(\forall X4.((v3_funct_1 X4)\wedge(m1_borsuk_2 \\
& X4 X0 X1 X1))\Rightarrow(r4_borsuk_2 X0 X1 X2 (k1_borsuk_2 X0 X1 X1 X2 X4 X3) X3))))))
\end{aligned}$$