

t88_tsep_1 (TMJPHZE- qAt5vxBSxKkTq1cEoHJ9J7rkvmyW)

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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 $m1_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tsep_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tsep_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_tsep_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_borsuk_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3_tsep_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((v1_borsuk_1 X1 X0) \wedge (m1_pre_topc X1 X0)) \Rightarrow \\ & (\forall X2.((v1_borsuk_1 X2 X0) \wedge (m1_pre_topc X2 X0)) \Rightarrow (r4_tsep_1 \\ & X0 X1 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow (((r1_tsep_1 \\ & X1 X2) \wedge (r4_tsep_1 X0 X1 X2)) \Leftrightarrow (r3_tsep_1 X0 X1 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2.((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow (((X0 = k1_tsep_1 \\ & X0 X1 X2) \wedge (r3_tsep_1 X0 X1 X2)) \Rightarrow ((v1_borsuk_1 X1 X0) \wedge (m1_pre_topc \\ & X1 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((l1_pre_topc X0) \wedge ((m1_pre_topc \\ & X1 X0) \wedge (m1_pre_topc X2 X0))) \Rightarrow ((r3_tsep_1 X0 X1 X2) \Rightarrow (r3_tsep_1 \\ & X0 X2 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge (l1_pre_topc \\ & X0)) \wedge (((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \wedge ((\neg v2_struct_0 \\ & X2) \wedge (m1_pre_topc X2 X0)))) \Rightarrow (k1_tsep_1 X0 X1 X2 = k1_tsep_1 X0 X2 \\ & X1) \end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (v2_pre_topc X0) \wedge (l1_pre_topc \\ & X0)) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge (m1_pre_topc X1 X0)) \Rightarrow (\\ & \forall X2. ((\neg v2_struct_0 X2) \wedge (m1_pre_topc X2 X0)) \Rightarrow (((X0 = k1_tsep_1 \\ & X0 X1 X2) \wedge (r1_tsep_1 X1 X2)) \Rightarrow ((r4_tsep_1 X0 X1 X2) \Leftrightarrow (((v1_borsuk_1 \\ & X1 X0) \wedge (m1_pre_topc X1 X0)) \wedge (v1_borsuk_1 X2 X0) \wedge (m1_pre_topc \\ & X2 X0)))))) \end{aligned}$$