

t50_parsp_2
(TMVZdwR5rSTKgFfxA51mzoZoHqfgkokwRMs)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_parsp_1 : \iota \Rightarrow o$ be given. Let $v1_parsp_2 : \iota \Rightarrow o$ be given. Let $l1_parsp_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r3_parsp_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_parsp_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_parsp_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_parsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_parsp_1 X0) \wedge ((v1_parsp_2 \\ & X0) \wedge (l1_parsp_1 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X0)) \Rightarrow ((r3_parsp_2 X0 X1 X2 X3 X4) \Rightarrow (r1_parsp_1 X0 X1 \\ & X3 X2 X4)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_parsp_1 X0) \wedge ((v1_parsp_2 \\ & X0) \wedge (l1_parsp_1 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X0)) \Rightarrow ((r3_parsp_2 X0 X1 X2 X3 X4) \Rightarrow (r1_parsp_1 X0 X1 \\ & X2 X3 X4)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_parsp_1 X0) \wedge ((v1_parsp_2 \\ & X0) \wedge (l1_parsp_1 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X0)) \Rightarrow ((r2_parsp_2 X0 X1 X2 X3 X4) \Leftrightarrow ((\neg r1_parsp_2 X0 \\ & X1 X2 X3) \wedge ((r1_parsp_1 X0 X1 X2 X3 X4) \wedge (r1_parsp_1 X0 X1 X3 X2 X4)))))) \end{aligned} \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_parsp_1 X0) \wedge ((v1_parsp_2 \\ & X0) \wedge (l1_parsp_1 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ & X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ & (u1_struct_0 X0)) \Rightarrow ((r3_parsp_2 X0 X1 X2 X3 X4) \Rightarrow ((r1_parsp_2 X0 \\ & X1 X2 X3) \vee (r2_parsp_2 X0 X1 X2 X3 X4))))))) \end{aligned}$$