

t38_parsp_2 (TMZZroxSqLNSWjfQPXvdtU- TUs9BoBkdoAvW)

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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 $r1_parsp_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_parsp_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_parsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_parsp_1 X0) \wedge ((v1_parsp_2 \\
 & X0) \wedge (l1_parsp_1 X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\
 & X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\
 & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 \\
 & (u1_struct_0 X0)) \Rightarrow (\neg (r2_parsp_2 X0 X1 X2 X3 X4) \wedge (r1_parsp_1 X0 \\
 & X1 X4 X2 X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v2_parsp_1 X0) \wedge ((v1_parsp_2 \\
 & X0) \wedge (l1_parsp_1 X0)))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\
 & X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\
 & (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\neg (\neg r1_parsp_2 X0 X1 X2 X3) \wedge \\
 & (\forall X4. (m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow (\neg r2_parsp_2 X0 \\
 & X1 X2 X3 X4))))))
 \end{aligned} \tag{2}$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_parsp_1 X0) \wedge ((v1_parsp_2 \\
& X0) \wedge (l1_parsp_1 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\
& (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
& (u1_struct_0 X0)) \Rightarrow ((r2_parsp_2 X0 X1 X2 X3 X4) \Rightarrow ((X1 \neq X2) \wedge ((X2 \neq \\
& X3) \wedge ((X3 \neq X1) \wedge ((X1 \neq X4) \wedge ((X2 \neq X4) \wedge (X3 \neq X4))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_parsp_1 X0) \wedge (l1_parsp_1 \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
& (\forall X5.(m1_subset_1 X5 (u1_struct_0 X0)) \Rightarrow (\forall X6.(m1_subset_1 \\
& X6 (u1_struct_0 X0)) \Rightarrow (((r1_parsp_1 X0 X3 X4 X1 X2) \wedge (r1_parsp_1 \\
& X0 X1 X2 X5 X6)) \Rightarrow ((X1 = X2) \vee (r1_parsp_1 X0 X3 X4 X5 X6))))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_parsp_1 X0) \wedge (l1_parsp_1 \\
& X0))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. \\
& (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 \\
& (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 X0)) \Rightarrow \\
& ((r1_parsp_1 X0 X1 X2 X3 X4) \Rightarrow ((r1_parsp_1 X0 X2 X1 X3 X4) \wedge ((r1_parsp_1 \\
& X0 X1 X2 X4 X3) \wedge ((r1_parsp_1 X0 X2 X1 X4 X3) \wedge ((r1_parsp_1 X0 X3 X4 X1 \\
& X2) \wedge ((r1_parsp_1 X0 X4 X3 X1 X2) \wedge ((r1_parsp_1 X0 X3 X4 X2 X1) \wedge (r1_parsp_1 \\
& X0 X4 X3 X2 X1))))))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_parsp_1 X0) \wedge ((v1_parsp_2 \\ X0) \wedge (l1_parsp_1 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\neg(X1 \neq X2) \wedge \\ (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (r1_parsp_2 X0 \\ X1 X2 X3)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_parsp_1 X0) \wedge ((v1_parsp_2 \\ X0) \wedge (l1_parsp_1 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((r1_parsp_2 X0 X1 X2 X3) \Rightarrow ((\\ r1_parsp_2 X0 X1 X3 X2) \wedge ((r1_parsp_2 X0 X3 X2 X1) \wedge ((r1_parsp_2 X0 \\ X2 X1 X3) \wedge ((r1_parsp_2 X0 X2 X3 X1) \wedge (r1_parsp_2 X0 X3 X1 X2)))))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_parsp_1 X0) \wedge ((v1_parsp_2 \\ X0) \wedge (l1_parsp_1 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\ (u1_struct_0 X0)) \Rightarrow ((r2_parsp_2 X0 X1 X2 X3 X4) \Leftrightarrow ((\neg r1_parsp_2 X0 \\ X1 X2 X3) \wedge ((r1_parsp_1 X0 X1 X2 X3 X4) \wedge (r1_parsp_1 X0 X1 X3 X2 X4)))))))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_parsp_1 X0) \wedge ((v1_parsp_2 \\ X0) \wedge (l1_parsp_1 X0)))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. \\ (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((r1_parsp_2 X0 X1 X2 X3) \Leftrightarrow (r1_parsp_1 \\ X0 X1 X2 X1 X3)))))) \end{aligned} \quad (10)$$

Theorem 1

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