

t22_osalg_2 (TMUjpVUiNxT- TwUKa3wEyBa4RbUYUhuZcFKv)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v4_osalg_1 : \iota \Rightarrow o$ be given. Let $v5_osalg_1 : \iota \Rightarrow o$ be given. Let $l3_osalg_1 : \iota \Rightarrow o$ be given. Let $v12_osalg_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l3_msualg_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_osalg_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_osalg_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_msualg_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_osalg_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_msualg_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m3_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u3_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_osalg_1 : \iota \Rightarrow o$ be given. Let $l2_osalg_1 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v4_osalg_1 \\ X0) \wedge ((v5_osalg_1 X0) \wedge (l3_osalg_1 X0)))))) \Rightarrow (\forall X1.((v12_osalg_1 \\ X1 X0) \wedge (l3_msualg_1 X1 X0)) \Rightarrow (\forall X2.(m2_osalg_2 X2 X0 X1) \Rightarrow \\ (r1_tarski (k5_osalg_2 X0 X1 X2) (k5_msualg_2 X0 X1 X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge \\ ((v4_osalg_1 X0) \wedge ((v5_osalg_1 X0) \wedge (l3_osalg_1 X0)))))) \wedge ((v12_osalg_1 \\ X1 X0) \wedge (l3_msualg_1 X1 X0)) \Rightarrow (\forall X2.(m2_osalg_2 X2 X0 X1) \Rightarrow \\ (m3_pboole X2 (u1_struct_0 X0) (u3_msualg_1 X0 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(l3_osalg_1 X0) \Rightarrow ((l1_osalg_1 X0) \wedge (l2_osalg_1 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(l1_osalg_1 X0) \Rightarrow (l1_msualg_1 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_msualg_1 \\
& \quad X0))) \Rightarrow (\forall X1.(l3_msualg_1 X1 X0) \Rightarrow (\forall X2.(m3_pboole \\
& \quad X2 (u1_struct_0 X0) (u3_msualg_1 X0 X1)) \Rightarrow (\forall X3.(m1_subset_1 \\
& \quad X3 (u1_struct_0 X0) \Rightarrow (\forall X4.(X4 = k8_msualg_2 X0 X1 X2 X3) \Leftrightarrow \\
& \quad (\forall X5.(X5 \in X4) \Leftrightarrow (\exists X6.(m3_pboole X6 (u1_struct_0 X0) \\
& \quad (u3_msualg_1 X0 X1)) \wedge ((X6 \in k5_msualg_2 X0 X1 X2) \wedge (X5 = k1_funct_1 \\
& \quad \quad X6 X3))))))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v4_osalg_1 \\
& \quad X0) \wedge ((v5_osalg_1 X0) \wedge (l3_osalg_1 X0)))))) \Rightarrow (\forall X1.((v12_osalg_1 \\
& \quad X1 X0) \wedge (l3_msualg_1 X1 X0)) \Rightarrow (\forall X2.(m2_osalg_2 X2 X0 X1) \Rightarrow \\
& \quad (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(X4 = \\
& \quad k8_osalg_2 X0 X1 X2 X3) \Leftrightarrow (\forall X5.(X5 \in X4) \Leftrightarrow (\exists X6.(m2_osalg_2 \\
& \quad X6 X0 X1) \wedge ((X6 \in k5_osalg_2 X0 X1 X2) \wedge (X5 = k1_funct_1 X6 X3))))))))))
\end{aligned} \tag{7}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v4_osalg_1 \\
& \quad X0) \wedge ((v5_osalg_1 X0) \wedge (l3_osalg_1 X0)))))) \Rightarrow (\forall X1.((v12_osalg_1 \\
& \quad X1 X0) \wedge (l3_msualg_1 X1 X0)) \Rightarrow (\forall X2.(m2_osalg_2 X2 X0 X1) \Rightarrow \\
& \quad (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (r1_tarski (k8_osalg_2 \\
& \quad \quad X0 X1 X2 X3) (k8_msualg_2 X0 X1 X2 X3))))))
\end{aligned}$$