

t24_osalg_1
(TMQrogi7FUDZ2uL7V41EYvL12xY59bZRjia)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ 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 $r3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $k3_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_card_3 : \iota \Rightarrow \iota$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u3_msualg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_osalg_1 : \iota \Rightarrow o$ be given. Let $l2_osalg_1 : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge (l1_msualg_1 \\ X0))) \Rightarrow (\forall X1.(l3_msualg_1 X1 X0) \Rightarrow (\forall X2.(m1_subset_1 \\ X2 (u4_struct_0 X0)) \Rightarrow ((k3_msualg_1 X0 X2 X1 = k4_card_3 (k3_relat_1 \\ (k1_msualg_1 X0 X2) (u3_msualg_1 X0 X1))) \wedge ((k9_xtuple_0 (k3_relat_1 \\ (k1_msualg_1 X0 X2) (u3_msualg_1 X0 X1)) = k9_xtuple_0 (k1_msualg_1 \\ X0 X2)) \wedge (k4_msualg_1 X0 X2 X1 = k1_funct_1 (u3_msualg_1 X0 X1) (k2_msualg_1 \\ X0 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(l3_osalg_1 X0) \Rightarrow ((l1_osalg_1 X0) \wedge (l2_osalg_1 X0)) \tag{2}$$

Assume the following.

$$\forall X0.(l1_osalg_1 X0) \Rightarrow (l1_msualg_1 X0) \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge \\ (l1_msualg_1 X0))) \wedge (m1_subset_1 X1 (u4_struct_0 X0))) \Rightarrow (m1_subset_1 \\ (k2_msualg_1 X0 X1) (u1_struct_0 X0)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v4_osalg_1 \\
& X0) \wedge ((v5_osalg_1 X0) \wedge (l3_osalg_1 X0)))))) \Rightarrow (\forall X1.(l3_msualg_1 \\
& X1 X0) \Rightarrow ((v12_osalg_1 X1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow ((r3_orders_2 \\
& X0 X2 X3) \Rightarrow (r1_tarski (k1_funct_1 (u3_msualg_1 X0 X1) X2) (k1_funct_1 \\
& (u3_msualg_1 X0 X1) X3)))))))
\end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v11_struct_0 X0) \wedge ((v4_osalg_1 \\
& X0) \wedge ((v5_osalg_1 X0) \wedge (l3_osalg_1 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 (u4_struct_0 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (u4_struct_0 \\
& X0)) \Rightarrow (\forall X3.((v12_osalg_1 X3 X0) \wedge (l3_msualg_1 X3 X0)) \Rightarrow (\\
& (r3_orders_2 X0 (k2_msualg_1 X0 X1) (k2_msualg_1 X0 X2)) \Rightarrow (r1_tarski \\
& (k4_msualg_1 X0 X1 X3) (k4_msualg_1 X0 X2 X3))))))
\end{aligned}$$