

t1_waybel_9 (TMVkreM-
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Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $g1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $v5_orders_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X0))) \Rightarrow (\forall X2. \forall X3. (g1_orders_2 X0 X1 = g1_orders_2 \\ X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. (l1_orders_2 X0) \Rightarrow (m1_subset_1 (u1_orders_2 X0) (k1_zfmisc_1 \\ (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)))) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (l1_orders_2 X1) \Rightarrow (\forall X2. \\ ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\ X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ X0) (u1_struct_0 X1)))))) \Rightarrow ((v5_orders_3 X2 X0 X1) \Leftrightarrow (\forall X3. \\ (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4. (m1_subset_1 X4 \\ (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 X0 X3 X4) \Rightarrow (\forall X5. (m1_subset_1 \\ X5 (u1_struct_0 X1)) \Rightarrow (\forall X6. (m1_subset_1 X6 (u1_struct_0 \\ X1)) \Rightarrow (((X5 = k1_funct_1 X2 X3) \wedge (X6 = k1_funct_1 X2 X4)) \Rightarrow (r1_orders_2 \\ X1 X5 X6)))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1_orders_2 X0) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 \\ X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow ((r1_orders_2 \\ X0 X1 X2) \Leftrightarrow (k4_tarski X1 X2 \in u1_orders_2 X0)))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(l1_orders_2 X1) \Rightarrow (\forall X2. \\ & ((\neg v2_struct_0 X2) \wedge (l1_orders_2 X2)) \Rightarrow (\forall X3. ((\neg v2_struct_0 \\ & X3) \wedge (l1_orders_2 X3)) \Rightarrow (\forall X4. ((v1_funct_1 X4) \wedge ((v1_funct_2 \\ & X4 (u1_struct_0 X0) (u1_struct_0 X1)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1)))))) \Rightarrow (\forall X5. \\ & ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 (u1_struct_0 X2) (u1_struct_0 \\ & X3)) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X2) (u1_struct_0 X3)))))) \Rightarrow (((g1_orders_2 (u1_struct_0 X0) (u1_orders_2 \\ & X0) = g1_orders_2 (u1_struct_0 X2) (u1_orders_2 X2)) \wedge ((g1_orders_2 \\ & (u1_struct_0 X1) (u1_orders_2 X1) = g1_orders_2 (u1_struct_0 X3) \\ & (u1_orders_2 X3)) \wedge ((X4 = X5) \wedge (v5_orders_3 X4 X0 X1))) \Rightarrow (v5_orders_3 \\ & X5 X2 X3)))))) \end{aligned}$$