

t29_orders_2 (TMS-
bja3M5bmGVwobrcsyekVbAKfnEUNPjGW)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_orders_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow (\forall X2. (m1_subset_1 X2 (u1_struct_0 X0)) \Rightarrow (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0)) \Rightarrow ((X1 \in k3_orders_2 X0 X3 X2) \Leftrightarrow ((r2_orders_2 X0 X1 X2) \wedge (X1 \in X3))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0))))) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2. (m1_orders_2 X2 X0 X1) \Rightarrow (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\
& X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 \\
& X2 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (((X1 \neq k1_xboole_0) \Rightarrow ((m1_orders_2 \\
& X2 X0 X1) \Leftrightarrow (\exists X3.(m1_subset_1 X3 (u1_struct_0 X0)) \wedge ((X3 \in \\
& X1) \wedge (X2 = k3_orders_2 X0 X1 X3)))))) \wedge ((X1 = k1_xboole_0) \Rightarrow ((m1_orders_2 \\
& X2 X0 X1) \Leftrightarrow (X2 = k1_xboole_0))))))
\end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v3_orders_2 X0) \wedge ((v4_orders_2 \\
& X0) \wedge ((v5_orders_2 X0) \wedge (l1_orders_2 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\
& X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_orders_2 \\
& X2 X0 X1) \Rightarrow (r1_tarski X2 X1)))
\end{aligned}$$