

t27_waybel_0 (TM-
NubKWKakpRv2x9G2NiyKyobJfG83fQHLw)

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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 $v12_waybel.0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_subset.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_subset.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole.0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole.0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_orders.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset.1 X2 (k1_zfmisc.1 X0)) \Rightarrow (k9_subset.1 X0 X1 X2 = k3_xboole.0 X1 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_subset.1 X1 (k1_zfmisc.1 X0)) \wedge (m1_subset.1 X2 (k1_zfmisc.1 X0))) \Rightarrow (k4_subset.1 X0 X1 X2 = k2_xboole.0 X1 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset.1 X2 (k1_zfmisc.1 X0)) \Rightarrow (m1_subset.1 (k9_subset.1 X0 X1 X2) (k1_zfmisc.1 X0)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1_subset.1 X1 (k1_zfmisc.1 X0)) \wedge (m1_subset.1 X2 (k1_zfmisc.1 X0))) \Rightarrow (m1_subset.1 (k4_subset.1 X0 X1 X2) (k1_zfmisc.1 X0)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k3_xboole.0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k2_xboole.0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1))) \quad (6)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\
& (u1_struct_0 X0))) \Rightarrow ((v12_waybel_0 X1 X0) \Leftrightarrow (\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& X0)) \Rightarrow (((X2 \in X1) \wedge (r1_orders_2 X0 X3 X2)) \Rightarrow (X3 \in X1))))))
\end{aligned} \tag{7}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\
& (u1_struct_0 X0))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\
& (u1_struct_0 X0))) \Rightarrow (((v12_waybel_0 X1 X0) \wedge (v12_waybel_0 X2 X0)) \Rightarrow \\
& ((v12_waybel_0 (k9_subset_1 (u1_struct_0 X0) X1 X2) X0) \wedge (v12_waybel_0 \\
& (k4_subset_1 (u1_struct_0 X0) X1 X2) X0))))))
\end{aligned}$$