

t31\_yellow12 (TMKXXdiDwvRPBpxyhN-  
PHNa4dmUQGaec35ff)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v3\_orders\_2 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 \\ (u1\_struct\_0 X0)) \Rightarrow ((X2 \in k5\_waybel\_0 X0 X1) \Leftrightarrow (r1\_orders\_2 X0 X2 \\ X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \wedge \\ (m1\_subset\_1 X1 (u1\_struct\_0 X0))) \Rightarrow (m1\_subset\_1 (k5\_waybel\_0 \\ X0 X1) (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((l1\_orders\_2 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0)))) \Rightarrow (m1\_subset\_1 (k3\_waybel\_0 X0 X1) (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0))) \end{aligned} \quad (4)$$

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.

$$\begin{aligned}
& \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
& \quad (u1\_struct\_0 X0))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& \quad (u1\_struct\_0 X0))) \Rightarrow ((X2 = k3\_waybel\_0 X0 X1) \Leftrightarrow (\forall X3.(m1\_subset\_1 \\
& \quad X3 (u1\_struct\_0 X0) \Rightarrow ((X3 \in X2) \Leftrightarrow (\exists X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\
& \quad X0)) \wedge ((r1\_orders\_2 X0 X3 X4) \wedge (X4 \in X1))))))))))
\end{aligned} \tag{6}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge (l1\_orders\_2 \\
& \quad X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\
& \quad (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((X1 \in X2) \Rightarrow (r1\_tarski \\
& \quad (k5\_waybel\_0 X0 X1) (k3\_waybel\_0 X0 X2))))))
\end{aligned}$$