

## t16\_waybel32

(TMcqM7AVKwtgSVriPeNErhSL4htWyvqED5d)

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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  $v24\_waybel\_0 : \iota \Rightarrow o$  be given. Let  $v4\_waybel11 : \iota \Rightarrow o$  be given. Let  $l1\_waybel\_9 : \iota \Rightarrow o$  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  $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v13\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_waybel11 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_waybel11 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  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.

$$\forall X0. \forall X1. (\neg(\neg r1\_xboole\_0 X0 X1) \wedge (\forall X2. \neg(X2 \in X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2. (X2 \in X0) \wedge (X2 \in X1)) \wedge (r1\_xboole\_0 X0 X1)) \quad (2)$$

Assume the following.

$$\forall X0. (l1\_waybel\_9 X0) \Rightarrow ((l1\_pre\_topc X0) \wedge (l1\_orders\_2 X0)) \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge (l1\_waybel\_9 X0))) \Rightarrow ((v4\_waybel11 X0) \Leftrightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow ((v3\_pre\_topc X1 X0) \Leftrightarrow ((v1\_waybel11 X1 X0) \wedge (v13\_waybel\_0 X1 X0)))) \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge (l1\_orders\_2 \\
& \quad X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& \quad X0))) \Rightarrow ((v3\_waybel11 X1 X0) \Leftrightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge ( \\
& \quad (v1\_waybel\_0 X2 X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& \quad X0)))))) \Rightarrow (\neg(k1\_yellow\_0 X0 X2 \in X1) \wedge (\forall X3.(m1\_subset\_1 X3 \\
& \quad (u1\_struct\_0 X0)) \Rightarrow (\neg(X3 \in X2) \wedge (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\
& \quad X0)) \Rightarrow (((X4 \in X2) \wedge (r1\_orders\_2 X0 X3 X4)) \Rightarrow (X4 \in X1))))))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
& \quad (u1\_struct\_0 X0))) \Rightarrow ((v13\_waybel\_0 X1 X0) \Leftrightarrow (\forall X2.(m1\_subset\_1 \\
& \quad X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
& \quad X0)) \Rightarrow (((X2 \in X1) \wedge (r1\_orders\_2 X0 X2 X3)) \Rightarrow (X3 \in X1))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow ((v3\_orders\_2 \\
& \quad X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (r1\_orders\_2 \\
& \quad X0 X1 X1)))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge (l1\_orders\_2 \\
& \quad X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& \quad X0))) \Rightarrow ((v1\_waybel11 X1 X0) \Leftrightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge ( \\
& \quad (v1\_waybel\_0 X2 X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& \quad X0)))))) \Rightarrow (\neg(k1\_yellow\_0 X0 X2 \in X1) \wedge (r1\_xboole\_0 X2 X1))))))
\end{aligned} \tag{8}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\
& \quad X0) \wedge ((v5\_orders\_2 X0) \wedge ((v24\_waybel\_0 X0) \wedge ((v4\_waybel11 X0) \wedge \\
& \quad (l1\_waybel\_9 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
& \quad (u1\_struct\_0 X0))) \Rightarrow ((v3\_pre\_topc X1 X0) \Leftrightarrow ((v13\_waybel\_0 X1 X0) \wedge \\
& \quad (v3\_waybel11 X1 X0))))))
\end{aligned}$$