

## t46\_waybel11

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Let  $v2\_pre\_topc : \iota \Rightarrow o$  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  $v1\_lattice3 : \iota \Rightarrow o$  be given. Let  $v2\_lattice3 : \iota \Rightarrow o$  be given. Let  $v3\_lattice3 : \iota \Rightarrow o$  be given. Let  $v3\_waybel\_3 : \iota \Rightarrow o$  be given. Let  $v4\_waybel11 : \iota \Rightarrow o$  be given. Let  $l1\_waybel\_9 : \iota \Rightarrow o$  be given. Let  $v13\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  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  $v1\_waybel\_6 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_waybel\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v2\_pre\_topc X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\
 & X0) \wedge ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge \\
 & ((v3\_lattice3 X0) \wedge ((v3\_waybel\_3 X0) \wedge ((v4\_waybel11 X0) \wedge (l1\_waybel\_9 \\
 & X0)))))))))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow \\
 & (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\
 & (\neg(v3\_pre\_topc X2 X0) \wedge ((X1 \in X2) \wedge (\forall X3.(m1\_subset\_1 X3 ( \\
 & u1\_struct\_0 X0)) \Rightarrow (\neg(r1\_waybel\_3 X0 X3 X1) \wedge (X3 \in X2)))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((v2\_pre\_topc X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\
 & X0) \wedge ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge \\
 & ((v3\_lattice3 X0) \wedge ((v4\_waybel11 X0) \wedge (l1\_waybel\_9 X0)))))))))) \Rightarrow \\
 & (\forall X1.((v13\_waybel\_0 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
 & (u1\_struct\_0 X0)))) \Rightarrow ((v1\_waybel\_6 X1 X0) \Rightarrow (v3\_pre\_topc X1 X0)))
 \end{aligned} \tag{2}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge (l1\_orders\_2 \\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ X0))) \Rightarrow ((v1\_waybel\_6 X1 X0) \Leftrightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ X0)) \Rightarrow (\neg(X2 \in X1) \wedge (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow \\ (\neg(X3 \in X1) \wedge (r1\_waybel\_3 X0 X3 X2))))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow ((v1\_lattice3 X0) \Rightarrow (\neg v2\_struct\_0 X0)) \quad (5)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((v2\_pre\_topc X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\ X0) \wedge ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge \\ ((v3\_lattice3 X0) \wedge ((v3\_waybel\_3 X0) \wedge ((v4\_waybel11 X0) \wedge (l1\_waybel\_9 \\ X0)))))))))) \Rightarrow (\forall X1.((v13\_waybel\_0 X1 X0) \wedge (m1\_subset\_1 \\ X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow ((v3\_pre\_topc X1 X0) \Leftrightarrow (v1\_waybel\_6 \\ X1 X0))) \end{aligned}$$