

## l37\_waybel17

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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  $v1\_yellow\_0 : \iota \Rightarrow o$  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  $v1\_cantor\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_waybel\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_tops\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v3\_lattice3 : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v24\_waybel\_0 : \iota \Rightarrow o$  be given. Let  $v2\_waybel\_3 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v2\_pre\_topc X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\ & X0) \wedge ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge \\ & ((v3\_lattice3 X0) \wedge ((v3\_waybel\_3 X0) \wedge ((v4\_waybel11 X0) \wedge (l1\_waybel\_9 \\ & X0)))))))))) \Rightarrow ((v1\_cantor\_1 (ReplSep (toset (\lambda X1 : \iota.m1\_subset\_1 \\ & X1 (u1\_struct\_0 X0))) (\lambda X1 : \iota.True) (\lambda X1 : \iota.k2\_waybel\_3 \\ & X0 X1)) X0) \wedge ((v1\_tops\_2 (ReplSep (toset (\lambda X1 : \iota.m1\_subset\_1 \\ & X1 (u1\_struct\_0 X0))) (\lambda X1 : \iota.True) (\lambda X1 : \iota.k2\_waybel\_3 \\ & X0 X1)) X0) \wedge (m1\_subset\_1 (ReplSep (toset (\lambda X1 : \iota.m1\_subset\_1 \\ & X1 (u1\_struct\_0 X0))) (\lambda X1 : \iota.True) (\lambda X1 : \iota.k2\_waybel\_3 \\ & X0 X1)) (k1\_zfmisc\_1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(l1\_waybel\_9 X0) \Rightarrow ((l1\_pre\_topc X0) \wedge (l1\_orders\_2 X0)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow (((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge (v3\_waybel\_3 X0))) \Rightarrow ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v24\_waybel\_0 X0) \wedge (v2\_waybel\_3 X0)))))) \quad (5)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow ((v1\_lattice3 X0) \Rightarrow (\neg v2\_struct\_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow (((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge ((v1\_yellow\_0 X0) \wedge (v24\_waybel\_0 X0))))))) \Rightarrow ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 X0) \wedge (v3\_lattice3 X0)))))) \quad (7)$$

**Theorem 1**

$$\forall X0.((v2\_pre\_topc X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge ((v1\_yellow\_0 X0) \wedge ((v3\_waybel\_3 X0) \wedge ((v4\_waybel11 X0) \wedge (l1\_waybel\_9 X0)))))))))) \Rightarrow ((v1\_cantor\_1 (ReplSep (toset (\lambda X1 : \iota.m1\_subset\_1 X1 (u1\_struct\_0 X0))) (\lambda X1 : \iota.True) (\lambda X1 : \iota.k2\_waybel\_3 X0 X1)) X0) \wedge ((v1\_tops\_2 (ReplSep (toset (\lambda X1 : \iota.m1\_subset\_1 X1 (u1\_struct\_0 X0))) (\lambda X1 : \iota.True) (\lambda X1 : \iota.k2\_waybel\_3 X0 X1)) X0) \wedge (m1\_subset\_1 (ReplSep (toset (\lambda X1 : \iota.m1\_subset\_1 X1 (u1\_struct\_0 X0))) (\lambda X1 : \iota.True) (\lambda X1 : \iota.k2\_waybel\_3 X0 X1)) (k1\_zfmisc\_1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))))$$