

## t6\_waybel13

(TMKK4tbULZTLw9xLp4sbQW4skQFKPvuTUhx)

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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  $v2\_waybel\_8 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v4\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v7\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v7\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v22\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_yellow\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_lattice3 : \iota \Rightarrow o$  be given. Let  $k6\_waybel10 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $g1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_orders\_2 : \iota \Rightarrow \iota$  be given. Let  $v1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v24\_waybel\_0 : \iota \Rightarrow o$  be given. Let  $v1\_waybel\_8 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ & X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge ((v1\_yellow\_0 X0) \wedge \\ & ((v2\_waybel\_8 X0) \wedge (l1\_orders\_2 X0))))))) \Rightarrow (\forall X1. ((v1\_funct\_1 \\ & X1) \wedge ((v1\_funct\_2 X1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \wedge ((v7\_waybel\_1 \\ & X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\ & X0) (u1\_struct\_0 X0)))))) \Rightarrow ((v22\_waybel\_0 X1 X0 X0) \Rightarrow ((v3\_orders\_2 \\ & (k1\_yellow\_2 X0 X0 X1)) \wedge ((v4\_orders\_2 (k1\_yellow\_2 X0 X0 X1)) \wedge \\ & ((v5\_orders\_2 (k1\_yellow\_2 X0 X0 X1)) \wedge ((v1\_lattice3 (k1\_yellow\_2 \\ & X0 X0 X1)) \wedge ((v2\_lattice3 (k1\_yellow\_2 X0 X0 X1)) \wedge ((v2\_waybel\_8 \\ & (k1\_yellow\_2 X0 X0 X1)) \wedge (l1\_orders\_2 (k1\_yellow\_2 X0 X0 X1)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ & X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge ((v3\_lattice3 X0) \wedge \\ & (l1\_orders\_2 X0)))))) \Rightarrow (\forall X1. ((v4\_yellow\_0 X1 X0) \wedge ((v7\_yellow\_0 \\ & X1 X0) \wedge (m1\_yellow\_0 X1 X0)) \Rightarrow (k1\_yellow\_2 X0 X0 (k6\_waybel10 X0 \\ & X1) = g1\_orders\_2 (u1\_struct\_0 X1) (u1\_orders\_2 X1))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v3\_orders\_2 \\ X1) \wedge ((v5\_orders\_2 X1) \wedge (l1\_orders\_2 X1)))) \Rightarrow (((g1\_orders\_2 ( \\ u1\_struct\_0 X0) (u1\_orders\_2 X0) = g1\_orders\_2 (u1\_struct\_0 X1) \\ (u1\_orders\_2 X1)) \wedge (v2\_waybel\_8 X0)) \Rightarrow (v2\_waybel\_8 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow ((v1\_orders\_2 \\ (g1\_orders\_2 (u1\_struct\_0 X0) (u1\_orders\_2 X0))) \wedge (v5\_orders\_2 \\ (g1\_orders\_2 (u1\_struct\_0 X0) (u1\_orders\_2 X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge (l1\_orders\_2 \\ X0))) \Rightarrow ((v1\_orders\_2 (g1\_orders\_2 (u1\_struct\_0 X0) (u1\_orders\_2 \\ X0))) \wedge (v3\_orders\_2 (g1\_orders\_2 (u1\_struct\_0 X0) (u1\_orders\_2 \\ X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow ((\neg v2\_struct\_0 \\ (g1\_orders\_2 (u1\_struct\_0 X0) (u1\_orders\_2 X0))) \wedge (v1\_orders\_2 \\ (g1\_orders\_2 (u1\_struct\_0 X0) (u1\_orders\_2 X0)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge \\ ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge ((v3\_lattice3 \\ X0) \wedge (l1\_orders\_2 X0)))))) \wedge ((v4\_yellow\_0 X1 X0) \wedge ((v7\_yellow\_0 \\ X1 X0) \wedge ((v4\_waybel\_0 X1 X0) \wedge (m1\_yellow\_0 X1 X0)))))) \Rightarrow ((v1\_funct\_1 \\ (k6\_waybel10 X0 X1)) \wedge ((v1\_funct\_2 (k6\_waybel10 X0 X1) (u1\_struct\_0 \\ X0) (u1\_struct\_0 X0)) \wedge (v22\_waybel\_0 (k6\_waybel10 X0 X1) X0 X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge \\ ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge ((v3\_lattice3 \\ X0) \wedge (l1\_orders\_2 X0)))))) \wedge ((v4\_yellow\_0 X1 X0) \wedge ((v7\_yellow\_0 \\ X1 X0) \wedge (m1\_yellow\_0 X1 X0)))) \Rightarrow ((v1\_funct\_1 (k6\_waybel10 X0 X1)) \wedge \\ ((v1\_funct\_2 (k6\_waybel10 X0 X1) (u1\_struct\_0 X0) (u1\_struct\_0 \\ X0)) \wedge (v7\_waybel\_1 (k6\_waybel10 X0 X1) X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1\_orders\_2 X0) \Rightarrow (\forall X1. (m1\_yellow\_0 X1 X0) \Rightarrow \\ (l1\_orders\_2 X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \wedge \\ & (m1\_yellow\_0 X1 X0)) \Rightarrow ((v1\_funct\_1 (k6\_waybel10 X0 X1)) \wedge ((v1\_funct\_2 \\ & (k6\_waybel10 X0 X1) (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 \\ & (k6\_waybel10 X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) \\ & (u1\_struct\_0 X0)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & (m1\_yellow\_0 X1 X0) \Rightarrow ((v4\_yellow\_0 X1 X0) \Rightarrow ((v5\_orders\_2 X1) \wedge ( \\ & v4\_yellow\_0 X1 X0)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v3\_orders\_2 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & (m1\_yellow\_0 X1 X0) \Rightarrow ((v4\_yellow\_0 X1 X0) \Rightarrow ((v3\_orders\_2 X1) \wedge ( \\ & v4\_yellow\_0 X1 X0)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1\_orders\_2 X0) \Rightarrow (((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 \\ & X0) \wedge (v2\_waybel\_8 X0))) \Rightarrow ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge \\ & ((v24\_waybel\_0 X0) \wedge (v1\_waybel\_8 X0)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0. (l1\_orders\_2 X0) \Rightarrow ((v2\_lattice3 X0) \Rightarrow (\neg v2\_struct\_0 X0)) \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1\_orders\_2 X0) \Rightarrow (((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 \\ & X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge \\ & ((v1\_yellow\_0 X0) \wedge (v24\_waybel\_0 X0)))))))) \Rightarrow ((\neg v2\_struct\_0 X0) \wedge \\ & ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 X0) \wedge (v3\_lattice3 \\ & X0)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0. (l1\_orders\_2 X0) \Rightarrow ((v1\_orders\_2 X0) \Rightarrow (X0 = g1\_orders\_2 \\ (u1\_struct\_0 X0) (u1\_orders\_2 X0))) \quad (16)$$

### Theorem 1

$$\begin{aligned} & \forall X0. ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ & X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge ((v1\_yellow\_0 X0) \wedge \\ & ((v2\_waybel\_8 X0) \wedge (l1\_orders\_2 X0)))))))) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 \\ & X1) \wedge ((v4\_yellow\_0 X1 X0) \wedge ((v7\_yellow\_0 X1 X0) \wedge ((v4\_waybel\_0 \\ & X1 X0) \wedge (m1\_yellow\_0 X1 X0)))))) \Rightarrow (v2\_waybel\_8 X1)) \end{aligned}$$