

## t39\_waybel\_0

(TML6w6YEDiJ4VxbXqhdTywaPRsdfbq49gaq)

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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  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r2\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ &X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 \\ &X0)) \Rightarrow ((k1\_yellow\_0 X0 (k6\_domain\_1 (u1\_struct\_0 X0) X1) = X1) \wedge \\ &(k2\_yellow\_0 X0 (k6\_domain\_1 (u1\_struct\_0 X0) X1) = X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ &X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 \\ &X0)) \Rightarrow ((r1\_yellow\_0 X0 (k6\_domain\_1 (u1\_struct\_0 X0) X1)) \wedge (r2\_yellow\_0 \\ &X0 (k6\_domain\_1 (u1\_struct\_0 X0) X1)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ &(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (((X1 = k2\_yellow\_0 \\ &X0 X2) \wedge (r2\_yellow\_0 X0 X2)) \Rightarrow ((r1\_lattice3 X0 X2 X1) \wedge (\forall X3. \\ &(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow ((r1\_lattice3 X0 X2 X3) \Rightarrow (r1\_orders\_2 \\ &X0 X3 X1)))))) \wedge (((r1\_lattice3 X0 X2 X1) \wedge (\forall X3. (m1\_subset\_1 \\ &X3 (u1\_struct\_0 X0)) \Rightarrow ((r1\_lattice3 X0 X2 X3) \Rightarrow (r1\_orders\_2 X0 X3 \\ &X1)))) \Rightarrow ((X1 = k2\_yellow\_0 X0 X2) \wedge (r2\_yellow\_0 X0 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0)) \Rightarrow ((X2 \in k6\_waybel\_0 X0 X1) \Leftrightarrow (r1\_orders\_2 X0 X1 \\ & X2)))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 X0)) \Rightarrow ((r1\_lattice3 X0 X1 X2) \Leftrightarrow (\forall X3.(m1\_subset\_1 \\ & X3 (u1\_struct\_0 X0)) \Rightarrow ((X3 \in X1) \Rightarrow (r1\_orders\_2 X0 X2 X3)))))) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 X0)) \Rightarrow ((r2\_yellow\_0 X0 X1) \Rightarrow ((X2 = k2\_yellow\_0 X0 \\ & X1) \Leftrightarrow ((r1\_lattice3 X0 X1 X2) \wedge (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ & X0)) \Rightarrow ((r1\_lattice3 X0 X1 X3) \Rightarrow (r1\_orders\_2 X0 X3 X2))))))) \end{aligned} \tag{6}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\ & X0) \wedge ((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 (u1\_struct\_0 X0)) \Rightarrow ((r2\_yellow\_0 X0 (k6\_waybel\_0 X0 X1)) \wedge (k2\_yellow\_0 \\ & X0 (k6\_waybel\_0 X0 X1) = X1))) \end{aligned}$$