

t82\_waybel\_1  
(TMLjx7fdqLPze619KEymR3e13Ni8Kcncs8Y)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_yellow\_0 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v9\_waybel\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_yellow\_0 : \iota \Rightarrow \iota$  be given. Let  $k6\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v3\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v4\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_lattice3 : \iota \Rightarrow o$  be given. Let  $v2\_lattice3 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow ((v9\_waybel\_1 \\ X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 \\ (u1\_struct\_0 X0)) \Rightarrow ((r1\_orders\_2 X0 (k11\_lattice3 X0 X2 X3) X1) \Leftrightarrow \\ (r1\_orders\_2 X0 X3 (k6\_waybel\_1 X0 X2 X1)))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v5\_orders\_2 X0) \wedge ((v1\_yellow\_0 \\ X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 \\ X0)) \Rightarrow (r1\_orders\_2 X0 (k3\_yellow\_0 X0) X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (l1\_orders\_2 X0) \Rightarrow (m1\_subset\_1 (k3\_yellow\_0 X0) (u1\_struct\_0 X0)) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((l1\_orders\_2 X0) \wedge ((m1\_subset\_1 \\ X1 (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 X0)))) \Rightarrow (m1\_subset\_1 \\ (k11\_lattice3 X0 X1 X2) (u1\_struct\_0 X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. (l1\_orders\_2 X0) \Rightarrow ((v5\_orders\_2 X0) \Leftrightarrow (\forall X1. ( \\ m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 \\ (u1\_struct\_0 X0)) \Rightarrow ((r1\_orders\_2 X0 X1 X2) \wedge (r1\_orders\_2 X0 X2 \\ X1)) \Rightarrow (X1 = X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (k7\_waybel\_1 X0 X1 = k6\_waybel\_1 \\ X0 X1 (k3\_yellow\_0 X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (((\neg v2\_struct\_0 X0) \wedge (v9\_waybel\_1 \\ X0)) \Rightarrow ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge \\ ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge (v2\_lattice3 X0))))))) \end{aligned} \quad (7)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v1\_yellow\_0 X0) \wedge (l1\_orders\_2 \\ X0))) \Rightarrow ((v9\_waybel\_1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((r1\_orders\_2 \\ X0 X2 (k7\_waybel\_1 X0 X1)) \Leftrightarrow (k11\_lattice3 X0 X1 X2 = k3\_yellow\_0 X0)))))) \end{aligned}$$