

# t1\_waybel16 (TMMqKYR- mZai6moboEdvh5NfdT38xRiHhQkw)

October 27, 2020

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  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $r2\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ X0) \wedge ((v1\_lattice3 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow (\forall X1. (m1\_subset\_1 \\ X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 \\ X0)) \Rightarrow (k6\_waybel\_0 X0 (k13\_lattice3 X0 X1 X2) = k9\_subset\_1 (u1\_struct\_0 \\ X0) (k6\_waybel\_0 X0 X1) (k6\_waybel\_0 X0 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\ X0) \wedge ((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow (\forall X1. (m1\_subset\_1 \\ X1 (u1\_struct\_0 X0)) \Rightarrow ((r2\_yellow\_0 X0 (k6\_waybel\_0 X0 X1)) \wedge (k2\_yellow\_0 \\ X0 (k6\_waybel\_0 X0 X1) = X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((v5\_orders\_2 X0) \wedge ((v1\_lattice3 \\ X0) \wedge (l1\_orders\_2 X0))) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge ( \\ m1\_subset\_1 X2 (u1\_struct\_0 X0)))) \Rightarrow (m1\_subset\_1 (k13\_lattice3 \\ X0 X1 X2) (u1\_struct\_0 X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (l1\_orders\_2 X0) \Rightarrow ((v1\_lattice3 X0) \Rightarrow (\neg v2\_struct\_0 X0)) \quad (4)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ & X0) \wedge ((v1\_lattice3 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\ & X0)) \Rightarrow (k2\_yellow\_0 X0 (k9\_subset\_1 (u1\_struct\_0 X0) (k6\_waybel\_0 \\ & X0 X1) (k6\_waybel\_0 X0 X2)) = k13\_lattice3 X0 X1 X2))) \end{aligned}$$