

t49\_yellow\_7

(TMEgfm5TgiKYxrUN1X3jzSEtHHnUxhiG6ar)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v5\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v3\_lattice3 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k4\_yellow\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_yellow\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_lattice3 : \iota \Rightarrow \iota$  be given. Let  $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  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  $v1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v5\_orders\_2 X0) \wedge ((v3\_lattice3 X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow (\forall X1.(r1\_yellow\_0 X0 X1) \wedge (r2\_yellow\_0 X0 X1)) \quad (1)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1.((r2\_yellow\_0 X0 X1) \vee (r1\_yellow\_0 (k7\_lattice3 X0) X1)) \Rightarrow (k2\_yellow\_0 X0 X1 = k1\_yellow\_0 (k7\_lattice3 X0) X1)) \quad (2)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1.((r1\_yellow\_0 X0 X1) \vee (r2\_yellow\_0 (k7\_lattice3 X0) X1)) \Rightarrow (k1\_yellow\_0 X0 X1 = k2\_yellow\_0 (k7\_lattice3 X0) X1)) \quad (3)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow ((\neg v2\_struct\_0 (k7\_lattice3 X0)) \wedge (v1\_orders\_2 (k7\_lattice3 X0))) \quad (4)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow ((v1\_orders\_2 (k7\_lattice3 X0)) \wedge (l1\_orders\_2 (k7\_lattice3 X0))) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & (v1\_relat\_1 X1) \Rightarrow (k5\_yellow\_2 X0 X1 = k2\_yellow\_0 X0 (k10\_xtuple\_0 \\ & X1))) \end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & (v1\_relat\_1 X1) \Rightarrow (k4\_yellow\_2 X0 X1 = k1\_yellow\_0 X0 (k10\_xtuple\_0 \\ & X1))) \end{aligned} \tag{7}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v5\_orders\_2 X0) \wedge ((v3\_lattice3 \\ & X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 \\ & X1)) \Rightarrow ((k4\_yellow\_2 X0 X1 = k5\_yellow\_2 (k7\_lattice3 X0) X1) \wedge (k5\_yellow\_2 \\ & X0 X1 = k4\_yellow\_2 (k7\_lattice3 X0) X1))) \end{aligned}$$