

# t4\_yellow\_3 (TMXZEN- wjHX3MTQDyrYLEGJLjQRcMJuGruop)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v3\_orders\_2 : \iota \Rightarrow o$  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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k12\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r2\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_lattice3 : \iota \Rightarrow o$  be given. Let  $r3\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_lattice3 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v5\_orders\_2 X0) \wedge ((v3\_lattice3 \\ & X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X2.(X1 = k1\_yellow\_0 X0 X2) \Leftrightarrow ((r2\_lattice3 X0 X2 X1) \wedge \\ & (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow ((r2\_lattice3 \\ & X0 X2 X3) \Rightarrow (r1\_orders\_2 X0 X1 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v3\_orders\_2 X0) \wedge ((v5\_orders\_2 X0) \wedge ((v2\_lattice3 \\ & X0) \wedge (l1\_orders\_2 X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((X1 = k12\_lattice3 \\ & X0 X1 X2) \Leftrightarrow (r3\_orders\_2 X0 X1 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 \\ & X0) \wedge (l1\_orders\_2 X0))) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge \\ & m1\_subset\_1 X2 (u1\_struct\_0 X0))) \Rightarrow ((r3\_orders\_2 X0 X1 X2) \Leftrightarrow (r1\_orders\_2 \\ & X0 X1 X2)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (l1\_orders\_2 X0) \Rightarrow (m1\_subset\_1 (k1\_yellow\_0 X0 X1) (u1\_struct\_0 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.\forall X2.(m1\_subset\_1 \\ X2 (u1\_struct\_0 X0)) \Rightarrow ((r2\_lattice3 X0 X1 X2) \Leftrightarrow (\forall X3.(m1\_subset\_1 \\ X3 (u1\_struct\_0 X0)) \Rightarrow ((X3 \in X1) \Rightarrow (r1\_orders\_2 X0 X3 X2)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((v5\_orders\_2 X0) \wedge ((v2\_lattice3 \\ X0) \wedge (l1\_orders\_2 X0))) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge ( \\ m1\_subset\_1 X2 (u1\_struct\_0 X0)))) \Rightarrow (k12\_lattice3 X0 X1 X2 = k12\_lattice3 \\ X0 X2 X1)) \end{aligned} \quad (6)$$

Assume the following.

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

**Theorem 1**

$$\begin{aligned} \forall X0.(((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ X0) \wedge ((v3\_lattice3 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 \\ X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2.(m1\_subset\_1 \\ X2 (u1\_struct\_0 X0)) \Rightarrow ((X2 \in X1) \Rightarrow (k12\_lattice3 X0 (k1\_yellow\_0 \\ X0 X1) X2 = X2)))) \end{aligned}$$