

t25\_yellow\_0

(TMGm3m2S4Mh2TF3zUvcciSGCXTKy5ohoFQp)

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Let  $v3\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v5\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v2\_lattice3 : \iota \Rightarrow o$  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  $k12\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r3\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v5\_orders\_2 X0) \wedge ((v2\_lattice3 X0) \wedge (l1\_orders\_2 \\ & X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 \\ & (u1\_struct\_0 X0)) \Rightarrow ((X3 = k12\_lattice3 X0 X1 X2) \Leftrightarrow ((r1\_orders\_2 \\ & X0 X3 X1) \wedge ((r1\_orders\_2 X0 X3 X2) \wedge (\forall X4.(m1\_subset\_1 X4 ( \\ & u1\_struct\_0 X0)) \Rightarrow (((r1\_orders\_2 X0 X4 X1) \wedge (r1\_orders\_2 X0 X4 X2)) \Rightarrow \\ & (r1\_orders\_2 X0 X4 X3)))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 \\ & X0) \wedge (l1\_orders\_2 X0))) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge ( \\ & m1\_subset\_1 X2 (u1\_struct\_0 X0)))) \Rightarrow ((r3\_orders\_2 X0 X1 X2) \Leftrightarrow (r1\_orders\_2 \\ & X0 X1 X2)) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

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

**Theorem 1**

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