

t7\_yellow\_0 (TM-  
Rxje5RFmSc2TFGwFyoGv8ge9Bu9GgADH2)

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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  $r1\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.\forall X2.(m1\_subset\_1 \\ X2 (u1\_struct\_0 X0)) \Rightarrow ((r2\_lattice3 X0 X1 X2) \Leftrightarrow (\forall X3.(m1\_subset\_1 \\ X3 (u1\_struct\_0 X0)) \Rightarrow ((X3 \in X1) \Rightarrow (r1\_orders\_2 X0 X3 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.\forall X2.(m1\_subset\_1 \\ X2 (u1\_struct\_0 X0)) \Rightarrow ((r1\_lattice3 X0 X1 X2) \Leftrightarrow (\forall X3.(m1\_subset\_1 \\ X3 (u1\_struct\_0 X0)) \Rightarrow ((X3 \in X1) \Rightarrow (r1\_orders\_2 X0 X2 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1\_tarski X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (3)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (((r1\_lattice3 \\ X0 (k1\_tarski X2) X1) \Rightarrow (r1\_orders\_2 X0 X1 X2)) \wedge (((r1\_orders\_2 X0 \\ X1 X2) \Rightarrow (r1\_lattice3 X0 (k1\_tarski X2) X1)) \wedge (((r2\_lattice3 X0 ( \\ k1\_tarski X2) X1) \Rightarrow (r1\_orders\_2 X0 X2 X1)) \wedge ((r1\_orders\_2 X0 X2 X1) \Rightarrow \\ (r2\_lattice3 X0 (k1\_tarski X2) X1)))))))))) \end{aligned}$$