

t10\_lattice7  
(TMMwrxn4qvtMDR8EBJJmM9Ca5LATkVLTBDgf)

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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  $v2\_lattice3 : \iota \Rightarrow o$  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  $k3\_lattice7 : \iota \Rightarrow \iota$  be given. Let  $k3\_yellow\_0 : \iota \Rightarrow \iota$  be given. Let  $k13\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\
& X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow \\
& (k3\_lattice7 X0 = ReplSep (toset (\lambda X1 : \iota. m1\_subset\_1 X1 (u1\_struct\_0 \\
& X0))) (\lambda X1 : \iota. (X1 \neq k3\_yellow\_0 X0) \wedge (\forall X2. (m1\_subset\_1 \\
& X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 \\
& X0)) \Rightarrow (\neg (X1 = k13\_lattice3 X0 X2 X3) \wedge ((X1 \neq X2) \wedge (X1 \neq X3)))))) (\lambda X1 : \\
& \iota. X1))
\end{aligned} \tag{1}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\
& X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow \\
& (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((X1 \in k3\_lattice7 \\
& X0) \Leftrightarrow ((X1 \neq k3\_yellow\_0 X0) \wedge (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\neg (X1 = k13\_lattice3 \\
& X0 X2 X3) \wedge ((X1 \neq X2) \wedge (X1 \neq X3))))))))))
\end{aligned}$$