

# t7\_lattices (TMWYzPmwJggEKu- VnQ7FW6s1QUcZhQ1QS8PQ)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v5\_lattices : \iota \Rightarrow o$  be given. Let  $l2\_lattices : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l2\_lattices X0)) \Rightarrow ((v5\_lattices \\ & \quad X0) \Leftrightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & \quad (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 \\ & \quad (u1\_struct\_0 X0)) \Rightarrow (k1\_lattices X0 X1 (k1\_lattices X0 X2 X3) = k1\_lattices \\ & \quad \quad X0 (k1\_lattices X0 X1 X2) X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l2\_lattices X0)) \Rightarrow (\forall X1. \\ & \quad (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 \\ & \quad (u1\_struct\_0 X0)) \Rightarrow ((r1\_lattices X0 X1 X2) \Leftrightarrow (k1\_lattices X0 X1 X2 = \\ & \quad \quad X2)))) \end{aligned} \tag{2}$$

## Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v5\_lattices X0) \wedge (l2\_lattices \\ & \quad X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & \quad (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 \\ & \quad (u1\_struct\_0 X0)) \Rightarrow (((r1\_lattices X0 X1 X2) \wedge (r1\_lattices X0 X2 \\ & \quad \quad X3)) \Rightarrow (r1\_lattices X0 X1 X3)))))) \end{aligned}$$