

# t1\_lattice3 (TMQuQLL73LrUEo4xqAhDL3CMDnF9X6KcBgf)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_lattice3 : \iota \Rightarrow \iota$  be given. Let  $k1\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. ((m1\_subset\_1 \\ & \quad X1 (u1\_struct\_0 (k1\_lattice3 X0))) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 \\ & \quad (k1\_lattice3 X0)))) \Rightarrow (((X1 = X3) \wedge (X2 = X4)) \Rightarrow (k2\_lattices (k1\_lattice3 \\ & \quad X0) X1 X2 = k3\_xboole\_0 X3 X4)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. ((m1\_subset\_1 \\ & \quad X1 (u1\_struct\_0 (k1\_lattice3 X0))) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 \\ & \quad (k1\_lattice3 X0)))) \Rightarrow (((X1 = X3) \wedge (X2 = X4)) \Rightarrow (k1\_lattices (k1\_lattice3 \\ & \quad X0) X1 X2 = k2\_xboole\_0 X3 X4)) \end{aligned} \tag{2}$$

## Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 (k1\_lattice3 \\ & \quad X0))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 (k1\_lattice3 \\ & \quad X0))) \Rightarrow ((k1\_lattices (k1\_lattice3 X0) X1 X2 = k2\_xboole\_0 X1 X2) \wedge \\ & \quad (k2\_lattices (k1\_lattice3 X0) X1 X2 = k3\_xboole\_0 X1 X2))) \end{aligned}$$