

# t7\_filter\_0 (TM- MGY9Z4gV1MQTP7JgpSaqJz2kmc5UvXc6c)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v6\_lattices : \iota \Rightarrow o$  be given. Let  $v7\_lattices : \iota \Rightarrow o$  be given. Let  $v8\_lattices : \iota \Rightarrow o$  be given. Let  $v9\_lattices : \iota \Rightarrow o$  be given. Let  $l3\_lattices : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r3\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_lattices : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v6\_lattices X0) \wedge ((v7\_lattices \\
 & X0) \wedge ((v8\_lattices X0) \wedge ((v9\_lattices X0) \wedge (l3\_lattices X0)))))) \Rightarrow \\
 & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
 & X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
 & X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (((r3\_lattices \\
 & X0 X1 X2) \wedge (r3\_lattices X0 X3 X4)) \Rightarrow (r3\_lattices X0 (k4\_lattices \\
 & X0 X1 X3) (k4\_lattices X0 X2 X4))))))) \tag{1}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge ((v6\_lattices X0) \wedge \\
 & ((v8\_lattices X0) \wedge ((v9\_lattices X0) \wedge (l3\_lattices X0)))))) \wedge ( \\
 & m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (k4\_lattices X0 X1 X1 = X1) \tag{2}
 \end{aligned}$$

## Theorem 1

$$\begin{aligned}
 & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v6\_lattices X0) \wedge ((v7\_lattices \\
 & X0) \wedge ((v8\_lattices X0) \wedge ((v9\_lattices X0) \wedge (l3\_lattices X0)))))) \Rightarrow \\
 & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\
 & X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
 & X0)) \Rightarrow (((r3\_lattices X0 X1 X2) \wedge (r3\_lattices X0 X1 X3)) \Rightarrow (r3\_lattices \\
 & X0 X1 (k4\_lattices X0 X2 X3))))))
 \end{aligned}$$