

## t35\_yellow\_3

(TMP58tezYU1gY2TpRc9T6mhubL8AdKWdJeW)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v5\_orders\_2 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r2\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2\_struct\_0 X1) \wedge (l1\_orders\_2 X1)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X3.(m1\_subset\_1 \\ & X3 (k1\_zfmisc\_1 (u1\_struct\_0 X1))) \Rightarrow (\forall X4.(m1\_subset\_1 \\ & X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 \\ & X1)) \Rightarrow (((r2\_lattice3 X0 X2 X4) \wedge (r2\_lattice3 X1 X3 X5)) \Rightarrow (r2\_lattice3 \\ & (k3\_yellow\_3 X0 X1) (k6\_yellow\_3 X0 X1 X2 X3) (k7\_yellow\_3 X0 X1 X4 \\ & X5)))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2\_struct\_0 X1) \wedge (l1\_orders\_2 X1)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X1)) \Rightarrow (\forall X5. \\ & (m1\_subset\_1 X5 (u1\_struct\_0 X1)) \Rightarrow (((r1\_orders\_2 X0 X2 X3) \wedge (r1\_orders\_2 \\ & X1 X4 X5)) \Leftrightarrow (r1\_orders\_2 (k3\_yellow\_3 X0 X1) (k7\_yellow\_3 X0 X1 X2 \\ & X4) (k7\_yellow\_3 X0 X1 X3 X5)))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((\neg v2\_struct\_0 \\ & X0) \wedge (l1\_orders\_2 X0)) \wedge (((\neg v2\_struct\_0 X1) \wedge (l1\_orders\_2 X1)) \wedge \\ & ((m1\_subset\_1 X2 (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X3 (u1\_struct\_0 \\ & X1)))))) \Rightarrow (m1\_subset\_1 (k7\_yellow\_3 X0 X1 X2 X3) (u1\_struct\_0 (k3\_yellow\_3 \\ & X0 X1))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(r1\_yellow\_0 X0 X1) \Leftrightarrow \\
& (\exists X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \wedge ((r2\_lattice3 \\
& X0 X1 X2) \wedge ((\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow ((r2\_lattice3 \\
& X0 X1 X3) \Rightarrow (r1\_orders\_2 X0 X2 X3))) \wedge (\forall X3.(m1\_subset\_1 X3 \\
& (u1\_struct\_0 X0)) \Rightarrow ((r2\_lattice3 X0 X1 X3) \wedge (\forall X4.(m1\_subset\_1 \\
& X4 (u1\_struct\_0 X0)) \Rightarrow ((r2\_lattice3 X0 X1 X4) \Rightarrow (r1\_orders\_2 X0 X3 \\
& X4)))))) \Rightarrow (X3 = X2))))))
\end{aligned} \tag{4}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v5\_orders\_2 X0) \wedge (l1\_orders\_2 \\
& X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v5\_orders\_2 X1) \wedge (l1\_orders\_2 \\
& X1))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& X0))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& X1))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5. \\
& (m1\_subset\_1 X5 (u1\_struct\_0 X1)) \Rightarrow (((r1\_yellow\_0 X0 X2) \wedge ((r1\_yellow\_0 \\
& X1 X3) \wedge (\forall X6.(m1\_subset\_1 X6 (u1\_struct\_0 (k3\_yellow\_3 \\
& X0 X1))) \Rightarrow ((r2\_lattice3 (k3\_yellow\_3 X0 X1) (k6\_yellow\_3 X0 X1 X2 \\
& X3) X6) \Rightarrow (r1\_orders\_2 (k3\_yellow\_3 X0 X1) (k7\_yellow\_3 X0 X1 X4 X5) \\
& X6)))))) \Rightarrow ((\forall X6.(m1\_subset\_1 X6 (u1\_struct\_0 X0)) \Rightarrow ((r2\_lattice3 \\
& X0 X2 X6) \Rightarrow (r1\_orders\_2 X0 X4 X6))) \wedge (\forall X6.(m1\_subset\_1 X6 \\
& (u1\_struct\_0 X1)) \Rightarrow ((r2\_lattice3 X1 X3 X6) \Rightarrow (r1\_orders\_2 X1 X5 X6))))))))))
\end{aligned}$$