

# t16\_yellow\_0 (TM- GREXD7UjyQcE1K7KybZQKgQVEDwngfhFQ)

October 27, 2020

Let  $v5\_orders\_2 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $r2\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(r2\_yellow\_0 X0 X1) \Leftrightarrow \\
 & (\exists X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \wedge (r1\_lattice3 \\
 & X0 X1 X2) \wedge ((\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow ((r1\_lattice3 \\
 & X0 X1 X3) \Rightarrow (r1\_orders\_2 X0 X3 X2)))) \wedge (\forall X3.(m1\_subset\_1 X3 \\
 & (u1\_struct\_0 X0)) \Rightarrow (((r1\_lattice3 X0 X1 X3) \wedge (\forall X4.(m1\_subset\_1 \\
 & X4 (u1\_struct\_0 X0)) \Rightarrow ((r1\_lattice3 X0 X1 X4) \Rightarrow (r1\_orders\_2 X0 X4 \\
 & X3)))) \Rightarrow (X3 = X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(l1\_orders\_2 X0) \Rightarrow ((v5\_orders\_2 X0) \Leftrightarrow (\forall X1.( \\
 & m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\
 & (u1\_struct\_0 X0)) \Rightarrow (((r1\_orders\_2 X0 X1 X2) \wedge (r1\_orders\_2 X0 X2 \\
 & X1)) \Rightarrow (X1 = X2))))))
 \end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned}
 & \forall X0.((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\
 & (r2\_yellow\_0 X0 X1) \Leftrightarrow (\exists X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\
 & X0)) \wedge ((r1\_lattice3 X0 X1 X2) \wedge (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\
 & X0)) \Rightarrow ((r1\_lattice3 X0 X1 X3) \Rightarrow (r1\_orders\_2 X0 X3 X2))))))
 \end{aligned}$$