

## t42\_yellow\_0

(TMVgyaP4rSUsewPDjwwVonp6rvy2wT9WvZy)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v5\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_yellow\_0 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $r2\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((r2\_lattice3 X0 k1\_xboole\_0 X1) \wedge (r1\_lattice3 X0 k1\_xboole\_0 X1))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0.((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1.(r2\_yellow\_0 X0 X1) \Leftrightarrow (\exists X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \wedge ((r1\_lattice3 X0 X1 X2) \wedge (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow ((r1\_lattice3 X0 X1 X3) \Rightarrow (r1\_orders\_2 X0 X3 X2)))))) \quad (3)$$

Assume the following.

$$\forall X0.((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1.(r1\_yellow\_0 X0 X1) \Leftrightarrow (\exists X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \wedge ((r2\_lattice3 X0 X1 X2) \wedge (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow ((r2\_lattice3 X0 X1 X3) \Rightarrow (r1\_orders\_2 X0 X2 X3)))))) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow (l1\_struct\_0 X0) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.\forall X2.(m1\_subset\_1 \\ X2 (u1\_struct\_0 X0)) \Rightarrow ((r1\_lattice3 X0 X1 X2) \Leftrightarrow (\forall X3.(m1\_subset\_1 \\ X3 (u1\_struct\_0 X0)) \Rightarrow ((X3 \in X1) \Rightarrow (r1\_orders\_2 X0 X2 X3)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow ((v1\_yellow\_0 X0) \Leftrightarrow (\exists X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge (r1\_lattice3 X0 (u1\_struct\_0 X0) X1))) \quad (8)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge (v5\_orders\_2 X0) \wedge ((v1\_yellow\_0 X0) \wedge (l1\_orders\_2 X0))) \Rightarrow ((r1\_yellow\_0 X0 k1\_xboole\_0) \wedge (r2\_yellow\_0 X0 (u1\_struct\_0 X0)))$$