

## t7\_yellow10

(TMMCX19EHRy2fT4iySFYmS6KZbgDv8TsB8J)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $u1\_orders\_2 : \iota \Rightarrow \iota$  be given. Let  $k2\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ ((\neg v2\_struct\_0 X1) \wedge (l1\_orders\_2 X1)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ X2 (u1\_struct\_0 (k3\_yellow\_3 X0 X1))) \Rightarrow (\forall X3.(m1\_subset\_1 \\ X3 (u1\_struct\_0 (k3\_yellow\_3 X0 X1))) \Rightarrow ((r1\_orders\_2 (k3\_yellow\_3 \\ X0 X1) X2 X3) \Leftrightarrow ((r1\_orders\_2 X0 (k8\_yellow\_3 X0 X1 X2) (k8\_yellow\_3 \\ X0 X1 X3)) \wedge (r1\_orders\_2 X1 (k9\_yellow\_3 X0 X1 X2) (k9\_yellow\_3 X0 \\ X1 X3))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X1 X0)) \Rightarrow (k6\_domain\_1 X0 X1 = k1\_tarski X1) \tag{2}$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge (\neg v1\_xboole\_0 X1)) \Rightarrow (\neg v1\_xboole\_0 (k2\_zfmisc\_1 X0 X1)) \tag{4}$$

Assume the following.

$$\forall X0. (l1\_orders\_2 X0) \Rightarrow (l1\_struct\_0 X0) \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0)\wedge(l1\_orders\_2 \\ & X0))\wedge(((\neg v2\_struct\_0 X1)\wedge(l1\_orders\_2 X1))\wedge(m1\_subset\_1 X2 \\ & (u1\_struct\_0 (k3\_yellow\_3 X0 X1))))))\Rightarrow(m1\_subset\_1 (k9\_yellow\_3 \\ & X0 X1 X2) (u1\_struct\_0 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0)\wedge(l1\_orders\_2 \\ & X0))\wedge(((\neg v2\_struct\_0 X1)\wedge(l1\_orders\_2 X1))\wedge(m1\_subset\_1 X2 \\ & (u1\_struct\_0 (k3\_yellow\_3 X0 X1))))))\Rightarrow(m1\_subset\_1 (k8\_yellow\_3 \\ & X0 X1 X2) (u1\_struct\_0 X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1\_orders\_2 X0)\wedge(l1\_orders\_2 X1))\Rightarrow( \\ & (v1\_orders\_2 (k3\_yellow\_3 X0 X1))\wedge(l1\_orders\_2 (k3\_yellow\_3 \\ & X0 X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_orders\_2 X0)\Rightarrow(\forall X1.\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 X0))\Rightarrow((r1\_lattice3 X0 X1 X2)\Leftrightarrow(\forall X3.(m1\_subset\_1 \\ & X3 (u1\_struct\_0 X0))\Rightarrow((X3 \in X1)\Rightarrow(r1\_orders\_2 X0 X2 X3)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_orders\_2 X0)\Rightarrow(\forall X1.(l1\_orders\_2 X1)\Rightarrow(\forall X2. \\ & ((v1\_orders\_2 X2)\wedge(l1\_orders\_2 X2))\Rightarrow((X2 = k3\_yellow\_3 X0 X1)\Leftrightarrow \\ & ((u1\_struct\_0 X2 = k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1))\wedge \\ & (u1\_orders\_2 X2 = k2\_yellow\_3 (u1\_struct\_0 X0) (u1\_struct\_0 X0) \\ & (u1\_struct\_0 X1) (u1\_struct\_0 X1) (u1\_orders\_2 X0) (u1\_orders\_2 \\ & X1)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(X1 = k1\_tarski X0)\Leftrightarrow(\forall X2.(X2 \in X1)\Leftrightarrow \\ & (X2 = X0)) \end{aligned} \quad (11)$$

### Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0)\wedge(l1\_orders\_2 X0))\Rightarrow(\forall X1. \\ & ((\neg v2\_struct\_0 X1)\wedge(l1\_orders\_2 X1))\Rightarrow(\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 (k3\_yellow\_3 X0 X1)))\Rightarrow(\forall X3.(m1\_subset\_1 \\ & X3 (u1\_struct\_0 (k3\_yellow\_3 X0 X1)))\Rightarrow((r1\_lattice3 (k3\_yellow\_3 \\ & X0 X1) (k6\_domain\_1 (u1\_struct\_0 (k3\_yellow\_3 X0 X1)) X3) X2)\Leftrightarrow( \\ & (r1\_lattice3 X0 (k6\_domain\_1 (u1\_struct\_0 X0) (k8\_yellow\_3 X0 \\ & X1 X3)) (k8\_yellow\_3 X0 X1 X2))\wedge(r1\_lattice3 X1 (k6\_domain\_1 (u1\_struct\_0 \\ & X1) (k9\_yellow\_3 X0 X1 X3)) (k9\_yellow\_3 X0 X1 X2)))))) \end{aligned}$$