t11_yellow_1 (TMbNK2XgUatue4UYsSA4QWXtmdUsc5w6ppN)

October 27, 2020

Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_lattice3 : \iota \Rightarrow o$ be given. Let $k2\_yellow\_1 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k10\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $r1\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5\_orders\_2 : \iota \Rightarrow o$ be given. Let $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v3\_orders\_2 : \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $g1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v4\_orders\_2 : \iota \Rightarrow o$ be given. Let $v1\_relat\_2 : \iota \Rightarrow o$ be given. Let $k1\_yellow\_1 : \iota \Rightarrow \iota$ be given. Let $v4\_relat\_2 : \iota \Rightarrow o$ be given. Let $v8\_relat\_2 : \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_orders\_2 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k2\_yellow\_1\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k2\_yellow\_1\ X0))) \Rightarrow ((k2\_xboole\_0\ X1\ X2 \in X0) \Rightarrow (k10\_lattice3\ (k2\_yellow\_1\ X0)\ X1\ X2 = k2\_xboole\_0\ X1\ X2))))) \tag{1}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (((r1\_lattice3\ X0\ (k2\_tarski\ X2\ X3)\ X1) \Rightarrow ((r1\_orders\_2\ X0\ X1\ X2) \wedge (r1\_orders\_2\ X0\ X1\ X3))) \wedge (((((r1\_orders\_2\ X0\ X1\ X2) \wedge (r1\_orders\_2\ X0\ X1\ X3)) \Rightarrow (r1\_lattice3\ X0\ (k2\_tarski\ X2\ X3)\ X1)) \wedge (((r2\_lattice3\ X0\ (k2\_tarski\ X2\ X3)\ X1) \Rightarrow ((r1\_orders\_2\ X0\ X2\ X1) \wedge (r1\_orders\_2\ X0\ X3\ X1))) \wedge (((r1\_orders\_2\ X0\ X2\ X1) \wedge (r1\_orders\_2\ X0\ X3\ X1)) \Rightarrow (r2\_lattice3\ X0\ (k2\_tarski\ X2\ X3)\ X1)))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1\_tarski\ X0\ X1)\wedge(r1\_tarski\ X2\ X1))\Rightarrow(r1\_tarski\ (k2\_xboole\_0\ X0\ X2)\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ (k2\_xboole\_0\ X0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k2\_yellow\_1\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k2\_yellow\_1\ X0)))\Rightarrow((r3\_orders\_2\ (k2\_yellow\_1\ X0)\ X1\ X2)\Leftrightarrow(r1\_tarski\ X1\ X2)))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1)\Rightarrow((v1\_xboole\_0\ X1)\vee(X0\in X1)) \tag{6}$$

Assume the following.

$$\forall X0.((v5\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow((v1\_lattice3\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(r1\_yellow\_0\ X0\ (k2\_tarski\ X1\ X2))))) \tag{7}$$

Assume the following.

$$\forall X0.((v5\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.(r1\_yellow\_0\ X0\ X1)\Leftrightarrow(\exists X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\wedge((r2\_lattice3\ X0\ X1\ X2)\wedge(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow((r2\_lattice3\ X0\ X1\ X3)\Rightarrow(r1\_orders\_2\ X0\ X2\ X3)))))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ X0 \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0)))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow((r3\_orders\_2\ X0\ X1\ X2)\Leftrightarrow(r1\_orders\_2\ X0\ X1\ X2)) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))\Rightarrow(\forall X2.\forall X3.(g1\_orders\_2\ X0\ X1 = g1\_orders\_2\ X2\ X3)\Rightarrow((X0 = X2)\wedge(X1 = X3))) \tag{11}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow((\neg v2\_struct\_0\ (k2\_yellow\_1\ X0))\wedge (v1\_orders\_2\ (k2\_yellow\_1\ X0))) \tag{12}$$

Assume the following.

$$\forall X0.(v1\_orders\_2\ (k2\_yellow\_1\ X0))\wedge((v3\_orders\_2\ (k2\_yellow\_1\ X0))\wedge((v4\_orders\_2\ (k2\_yellow\_1\ X0))\wedge(v5\_orders\_2\ (k2\_yellow\_1\ X0)))) \tag{13}$$

Assume the following.

$$\forall X0.(v1\_orders\_2\ (k2\_yellow\_1\ X0))\wedge(l1\_orders\_2\ (k2\_yellow\_1\ X0)) \tag{14}$$

Assume the following.

$$\forall X0.(v1\_relat\_2\ (k1\_yellow\_1\ X0))\wedge((v4\_relat\_2\ (k1\_yellow\_1\ X0))\wedge((v8\_relat\_2\ (k1\_yellow\_1\ X0))\wedge((v1\_partfun1\ (k1\_yellow\_1\ X0)\ X0)\wedge(m1\_subset\_1\ (k1\_yellow\_1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))))) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((l1\_orders\_2\ X0)\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow(m1\_subset\_1\ (k10\_lattice3\ X0\ X1\ X2)\ (u1\_struct\_0\ X0)) \tag{16}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(\forall X1.\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow((r2\_lattice3\ X0\ X1\ X2)\Leftrightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow((X3\in X1)\Rightarrow(r1\_orders\_2\ X0\ X3\ X2))))) \tag{17}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2\_tarski\ X0\ X1)\Leftrightarrow(\forall X3.\ (X3\in X2)\Leftrightarrow((X3 = X0)\vee(X3 = X1))) \tag{18}$$

Assume the following.

$$\forall X0.k2\_yellow\_1\ X0 = g1\_orders\_2\ X0\ (k1\_yellow\_1\ X0) \tag{19}$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0\ X0\ X1 = k2\_xboole\_0\ X1\ X0 \tag{20}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v1\_orders\_2\ X0)\Rightarrow(X0 = g1\_orders\_2\ (u1\_struct\_0\ X0)\ (u1\_orders\_2\ X0))) \tag{21}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow ((\forall X1.\forall X2.((X1 \in X0) \wedge (X2 \in X0)) \Rightarrow (k2\_xboole\_0\ X1\ X2 \in X0)) \Rightarrow (v1\_lattice3\ (k2\_yellow\_1\ X0)))$$