t23_waybel21 (TMU9aRMrkR8czRHKm5Ba9ry1xd5uKS2LyYA)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v4\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u1\_orders\_2 : \iota \Rightarrow \iota$ be given. Let $v3\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v2\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Assume the following.

$$\forall X0.(l1\_orders\_2\ X0) \Rightarrow (\forall X1.((v4\_yellow\_0\ X1\ X0) \wedge (m1\_yellow\_0\ X1\ X0)) \Rightarrow (\forall X2.((v4\_yellow\_0\ X2\ X0) \wedge (m1\_yellow\_0\ X2\ X0)) \Rightarrow ((u1\_struct\_0\ X1 = u1\_struct\_0\ X2) \Rightarrow (g1\_orders\_2\ (u1\_struct\_0\ X1)\ (u1\_orders\_2\ X1) = g1\_orders\_2\ (u1\_struct\_0\ X2)\ (u1\_orders\_2\ X2))))))) \tag{1}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0) \Rightarrow (\forall X1.(l1\_orders\_2\ X1) \Rightarrow ((g1\_orders\_2\ (u1\_struct\_0\ X0)\ (u1\_orders\_2\ X0) = g1\_orders\_2\ (u1\_struct\_0\ X1)\ (u1\_orders\_2\ X1)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1))) \Rightarrow (((X2 = X3) \wedge (v2\_waybel\_0\ X2\ X0)) \Rightarrow (v2\_waybel\_0\ X3\ X1)))))) \tag{2}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0) \Rightarrow (\forall X1.(l1\_orders\_2\ X1) \Rightarrow ((g1\_orders\_2\ (u1\_struct\_0\ X0)\ (u1\_orders\_2\ X0) = g1\_orders\_2\ (u1\_struct\_0\ X1)\ (u1\_orders\_2\ X1)) \Rightarrow (\forall X2.(r2\_yellow\_0\ X0\ X2) \Rightarrow (k2\_yellow\_0\ X0\ X2 = k2\_yellow\_0\ X1\ X2)))) \tag{3}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(\forall X1.(l1\_orders\_2\ X1)\Rightarrow((g1\_orders\_2\ (u1\_struct\_0\ X0)\ (u1\_orders\_2\ X0) = g1\_orders\_2\ (u1\_struct\_0\ X1)\ (u1\_orders\_2\ X1))\Rightarrow(\forall X2.((r1\_yellow\_0\ X0\ X2)\Rightarrow(r1\_yellow\_0\ X1\ X2))\wedge((r2\_yellow\_0\ X0\ X2)\Rightarrow(r2\_yellow\_0\ X1\ X2)))))) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(\forall X1.(l1\_orders\_2\ X1)\Rightarrow(\forall X2.(l1\_orders\_2\ X2)\Rightarrow(\forall X3.(m1\_yellow\_0\ X3\ X0)\Rightarrow(((g1\_orders\_2\ (u1\_struct\_0\ X0)\ (u1\_orders\_2\ X0) = g1\_orders\_2\ (u1\_struct\_0\ X1)\ (u1\_orders\_2\ X1))\wedge(g1\_orders\_2\ (u1\_struct\_0\ X3)\ (u1\_orders\_2\ X3) = g1\_orders\_2\ (u1\_struct\_0\ X2)\ (u1\_orders\_2\ X2)))\Rightarrow((m1\_yellow\_0\ X2\ X1)\wedge((v4\_yellow\_0\ X3\ X0)\Rightarrow((v4\_yellow\_0\ X2\ X1)\wedge(m1\_yellow\_0\ X2\ X1)))))))) \tag{5}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(\forall X1.(m1\_yellow\_0\ X1\ X0)\Rightarrow(l1\_orders\_2\ X1)) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.(m1\_yellow\_0\ X1\ X0)\Rightarrow((v3\_waybel\_0\ X1\ X0)\Leftrightarrow(\forall X2.((v2\_waybel\_0\ X2\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1))))\Rightarrow((r2\_yellow\_0\ X0\ X2)\Rightarrow((X2 = k1\_xboole\_0)\vee(k2\_yellow\_0\ X0\ X2\in u1\_struct\_0\ X1)))))) \tag{7}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge(l1\_orders\_2\ X1))\Rightarrow(\forall X2.((\neg v2\_struct\_0\ X2)\wedge((v4\_yellow\_0\ X2\ X0)\wedge(m1\_yellow\_0\ X2\ X0)))\Rightarrow(\forall X3.((\neg v2\_struct\_0\ X3)\wedge((v4\_yellow\_0\ X3\ X1)\wedge(m1\_yellow\_0\ X3\ X1)))\Rightarrow(((g1\_orders\_2\ (u1\_struct\_0\ X0)\ (u1\_orders\_2\ X0) = g1\_orders\_2\ (u1\_struct\_0\ X1)\ (u1\_orders\_2\ X1))\wedge((u1\_struct\_0\ X2 = u1\_struct\_0\ X3)\wedge(v3\_waybel\_0\ X2\ X0)))\Rightarrow(v3\_waybel\_0\ X3\ X1))))))$$