t37_waybel23 (TMZmAp8qk3Ewwopo6rh1KssHHu2wY5w8zap)

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Let $v3\_orders\_2 : \iota \Rightarrow o$ be given. Let $v4\_orders\_2 : \iota \Rightarrow o$ be given. Let $v5\_orders\_2 : \iota \Rightarrow o$ be given. Let $v1\_lattice3 : \iota \Rightarrow o$ 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 $v2\_waybel23 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13\_lattice3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_orders\_2 : \iota \Rightarrow o$ be given. Let $k5\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v6\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{1}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v1\_lattice3\ X0) \wedge (l1\_orders\_2\ X0))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (k1\_yellow\_0\ X0\ (k7\_domain\_1\ (u1\_struct\_0\ X0)\ X1\ X2) = k13\_lattice3\ X0\ X1\ X2))) \tag{2}$$

Assume the following.

$$\forall X0.((v5\_orders\_2\ X0) \wedge ((v1\_lattice3\ X0) \wedge (l1\_orders\_2\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow ((X3 = k13\_lattice3\ X0\ X1\ X2) \Leftrightarrow ((r1\_orders\_2\ X0\ X1\ X3) \wedge ((r1\_orders\_2\ X0\ X2\ X3) \wedge (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow (((r1\_orders\_2\ X0\ X1\ X4) \wedge (r1\_orders\_2\ X0\ X2\ X4)) \Rightarrow (r1\_orders\_2\ X0\ X3\ X4)))))))))) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.\ (m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow((X2\in k6\_waybel\_0\ X0\ X1)\Leftrightarrow(r1\_orders\_2\ X0\ X1\ X2)))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\wedge(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)))\Rightarrow(m1\_subset\_1\ (k6\_waybel\_0\ X0\ X1)\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((l1\_orders\_2\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))\Rightarrow((v1\_orders\_2\ (k5\_yellow\_0\ X0\ X1))\wedge((v4\_yellow\_0\ (k5\_yellow\_0\ X0\ X1)\ X0)\wedge(m1\_yellow\_0\ (k5\_yellow\_0\ X0\ X1)\ X0))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge(l1\_orders\_2\ X0)))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow(m1\_subset\_1\ (k13\_lattice3\ X0\ X1\ X2)\ (u1\_struct\_0\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v4\_orders\_2\ X0)\Leftrightarrow(\forall X1.(\ m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(((r1\_orders\_2\ X0\ X1\ X2)\wedge(r1\_orders\_2\ X0\ X2\ X3))\Rightarrow(r1\_orders\_2\ X0\ X1\ X3)))))) \tag{8}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.\ (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow((v2\_waybel23\ X1\ X0)\Leftrightarrow(v6\_yellow\_0\ (k5\_yellow\_0\ X0\ X1)\ X0))) \tag{9}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.\ (m1\_yellow\_0\ X1\ X0)\Rightarrow((v6\_yellow\_0\ X1\ X0)\Leftrightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(((X2\in u1\_struct\_0\ X1)\wedge((X3\in u1\_struct\_0\ X1)\wedge(r1\_yellow\_0\ X0\ (k7\_domain\_1\ (u1\_struct\_0\ X0)\ X2\ X3))))\Rightarrow(k1\_yellow\_0\ X0\ (k7\_domain\_1\ (u1\_struct\_0\ X0)\ X2\ X3)\in u1\_struct\_0\ X1)))))) \tag{10}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))\Rightarrow(\forall X2.((v1\_orders\_2\ X2)\wedge((v4\_yellow\_0\ X2\ X0)\wedge(m1\_yellow\_0\ X2\ X0)))\Rightarrow((X2 = k5\_yellow\_0\ X0\ X1)\Leftrightarrow(u1\_struct\_0\ X2 = X1)))) \tag{11}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v1\_lattice3\ X0)\Rightarrow(\neg v2\_struct\_0\ X0)) \tag{12}$$

Theorem 1

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge(l1\_orders\_2\ X0)))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(v2\_waybel23\ (k6\_waybel\_0\ X0\ X1)\ X0))$$