t58_waybel23 (TM-SyK1kSmAUxJQKPzoZqyBJoQNVJcQ1Fwdf)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. 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 $v24\_waybel\_0 : \iota \Rightarrow o$ 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 $v5\_orders\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_waybel23 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_yellow\_1 : \iota \Rightarrow \iota$ be given. Let $k7\_waybel\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v2\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v12\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_orders\_2 : \iota \Rightarrow o$ be given. Let $l1\_struct\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1) \wedge (l1\_orders\_2\ X1)) \Rightarrow (\forall X2.((\neg v2\_struct\_0\ X2) \wedge (m1\_yellow\_0\ X2\ X1)) \Rightarrow ((((v1\_waybel\_0\ X0\ X2) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X2)))) \Rightarrow ((v1\_waybel\_0\ X0\ X1) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1))))) \wedge (((v2\_waybel\_0\ X0\ X2) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X2)))) \Rightarrow ((v2\_waybel\_0\ X0\ X1) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1)))))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge (l1\_orders\_2\ X0)))) \Rightarrow ((v24\_waybel\_0\ X0) \Leftrightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge ((v1\_waybel\_0\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))) \Rightarrow (r1\_yellow\_0\ X0\ X1))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v3\_orders\_2\ X1)\wedge((v4\_orders\_2\ X1)\wedge(l1\_orders\_2\ X1))))\Rightarrow((m1\_subset\_1\ X0\ (u1\_struct\_0\ (k2\_yellow\_1\ (k7\_waybel\_0\ X1))))\Leftrightarrow((\neg v1\_xboole\_0\ X0)\wedge((v1\_waybel\_0\ X0\ X1)\wedge((v12\_waybel\_0\ X0\ X1)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1))))))) \tag{3}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k2\_yellow\_1\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k2\_yellow\_1\ X0)))\Rightarrow((r3\_orders\_2\ (k2\_yellow\_1\ X0)\ X1\ X2)\Leftrightarrow(r1\_tarski\ X1\ X2)))) \tag{4}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(\forall X1.\forall X2.((r1\_tarski\ X1\ X2)\wedge((r1\_yellow\_0\ X0\ X1)\wedge(r1\_yellow\_0\ X0\ X2)))\Rightarrow(r1\_orders\_2\ X0\ (k1\_yellow\_0\ X0\ X1)\ (k1\_yellow\_0\ X0\ X2))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0)))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow((r3\_orders\_2\ X0\ X1\ X2)\Leftrightarrow(r1\_orders\_2\ X0\ X1\ X2)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0)\wedge(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge(m1\_subset\_1\ X3\ X0)))\Rightarrow(k3\_funct\_2\ X0\ X1\ X2\ X3 = k1\_funct\_1\ X2\ X3) \tag{7}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow((\neg v2\_struct\_0\ (k2\_yellow\_1\ X0))\wedge(v1\_orders\_2\ (k2\_yellow\_1\ X0))) \tag{8}$$

Assume the following.

$$\forall X0.(v1\_orders\_2\ (k2\_yellow\_1\ X0))\wedge((v3\_orders\_2\ (k2\_yellow\_1\ X0))\wedge((v4\_orders\_2\ (k2\_yellow\_1\ X0))\wedge(v5\_orders\_2\ (k2\_yellow\_1\ X0)))) \tag{9}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0))))\Rightarrow(\neg v1\_xboole\_0\ (k7\_waybel\_0\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_struct\_0\ X0))\Rightarrow(\neg v1\_xboole\_0\ (u1\_struct\_0\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(\forall X1.(m1\_yellow\_0\ X1\ X0)\Rightarrow(l1\_orders\_2\ X1)) \tag{12}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(l1\_struct\_0\ X0) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0))))\wedge((\neg v2\_struct\_0\ X1)\wedge((v4\_yellow\_0\ X1\ X0)\wedge(m1\_yellow\_0\ X1\ X0))))\Rightarrow((v1\_funct\_1\ (k3\_waybel23\ X0\ X1))\wedge((v1\_funct\_2\ (k3\_waybel23\ X0\ X1)\ (u1\_struct\_0\ (k2\_yellow\_1\ (k7\_waybel\_0\ X1)))\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ (k3\_waybel23\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k2\_yellow\_1\ (k7\_waybel\_0\ X1)))\ (u1\_struct\_0\ X0))))))) \tag{14}$$

Assume the following.

$$\forall X0.(v1\_orders\_2\ (k2\_yellow\_1\ X0))\wedge(l1\_orders\_2\ (k2\_yellow\_1\ X0)) \tag{15}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge(l1\_orders\_2\ X1))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow((v5\_orders\_3\ X2\ X0\ X1)\Leftrightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\Rightarrow((r1\_orders\_2\ X0\ X3\ X4)\Rightarrow(r1\_orders\_2\ X1\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ X3)\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ X4)))))))) \tag{16}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v4\_yellow\_0\ X1\ X0)\wedge(m1\_yellow\_0\ X1\ X0)))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ (k2\_yellow\_1\ (k7\_waybel\_0\ X1)))\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k2\_yellow\_1\ (k7\_waybel\_0\ X1)))\ (u1\_struct\_0\ X0))))))\Rightarrow((X2 = k3\_waybel23\ X0\ X1)\Leftrightarrow(\forall X3.((\neg v1\_xboole\_0\ X3)\wedge((v1\_waybel\_0\ X3\ X1)\wedge((v12\_waybel\_0\ X3\ X1)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1))))))\Rightarrow(k1\_funct\_1\ X2\ X3 = k1\_yellow\_0\ X0\ X3))))) \tag{17}$$

Assume the following.

$$\forall X0.((v4\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.\ (m1\_yellow\_0\ X1\ X0)\Rightarrow((v4\_yellow\_0\ X1\ X0)\Rightarrow((v4\_orders\_2\ X1)\wedge(\ v4\_yellow\_0\ X1\ X0)))) \quad (18)$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.\ (m1\_yellow\_0\ X1\ X0)\Rightarrow((v4\_yellow\_0\ X1\ X0)\Rightarrow((v3\_orders\_2\ X1)\wedge(\ v4\_yellow\_0\ X1\ X0)))) \quad (19)$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v24\_waybel\_0\ X0)\wedge(l1\_orders\_2\ X0))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v4\_yellow\_0\ X1\ X0)\wedge(m1\_yellow\_0\ X1\ X0)))\Rightarrow(v5\_orders\_3\ (k3\_waybel23\ X0\ X1)\ (k2\_yellow\_1\ (k7\_waybel\_0\ X1))\ X0))$$