t18_waybel15 (TMTd-ABdnHmFF4oB3V7aeoNFpxEoWZ4Logz5)

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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 $v2\_lattice3 : \iota \Rightarrow o$ be given. Let $v1\_yellow\_0 : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v3\_waybel\_3 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ 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 $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k3\_yellow\_1 : \iota \Rightarrow \iota$ be given. Let $v6\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v22\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_yellow\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_waybel\_8 : \iota \Rightarrow o$ be given. Let $v2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v17\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v1\_lattice3\ X0) \wedge ((v2\_lattice3\ X0) \wedge ((v1\_yellow\_0\ X0) \wedge (l1\_orders\_2\ X0)))))) \Rightarrow ((v3\_waybel\_3\ X0) \Leftrightarrow (\exists X1.((v3\_orders\_2\ X1) \wedge ((v4\_orders\_2\ X1) \wedge ((v5\_orders\_2\ X1) \wedge ((v1\_lattice3\ X1) \wedge ((v2\_lattice3\ X1) \wedge ((v1\_yellow\_0\ X1) \wedge ((v2\_waybel\_8\ X1) \wedge (l1\_orders\_2\ X1)))))))) \wedge (\exists X2.((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0)))))) \wedge ((v2\_funct\_2\ X2\ (u1\_struct\_0\ X0)) \wedge ((v17\_waybel\_0\ X2\ X1\ X0) \wedge (v22\_waybel\_0\ X2\ X1\ X0))))))) \tag{1}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v1\_lattice3\ X0) \wedge ((v2\_lattice3\ X0) \wedge (l1\_orders\_2\ X0)))))) \Rightarrow ((\exists X1.\exists X2.((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ (u1\_struct\_0\ (k3\_yellow\_1\ X1))\ (u1\_struct\_0\ (k3\_yellow\_1\ X1))) \wedge ((v6\_waybel\_1\ X2\ (k3\_yellow\_1\ X1)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k3\_yellow\_1\ X1))\ (u1\_struct\_0\ (k3\_yellow\_1\ X1))))))) \wedge ((v22\_waybel\_0\ X2\ (k3\_yellow\_1\ X1)\ (k3\_yellow\_1\ X1)) \wedge (r5\_waybel\_1\ X0\ (k1\_yellow\_2\ (k3\_yellow\_1\ X1)\ (k3\_yellow\_1\ X1)\ X2)))) \Rightarrow (v3\_waybel\_3\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v1\_yellow\_0\ X0)\wedge(l1\_orders\_2\ X0)))))))\Rightarrow(\neg(\exists X1.((v3\_orders\_2\ X1)\wedge((v4\_orders\_2\ X1)\wedge((v5\_orders\_2\ X1)\wedge((v1\_lattice3\ X1)\wedge((v2\_lattice3\ X1)\wedge((v1\_yellow\_0\ X1)\wedge((v2\_waybel\_8\ X1)\wedge(l1\_orders\_2\ X1)))))))))\wedge(\exists X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))))))\wedge((v2\_funct\_2\ X2\ (u1\_struct\_0\ X0))\wedge((v17\_waybel\_0\ X2\ X1\ X0)\wedge(v22\_waybel\_0\ X2\ X1\ X0)))))\wedge(\forall X1.(\neg v1\_xboole\_0\ X1)\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ (k3\_yellow\_1\ X1))\ (u1\_struct\_0\ (k3\_yellow\_1\ X1)))\wedge((v6\_waybel\_1\ X2\ (k3\_yellow\_1\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k3\_yellow\_1\ X1))\ (u1\_struct\_0\ (k3\_yellow\_1\ X1))))))))\Rightarrow(\neg(v22\_waybel\_0\ X2\ (k3\_yellow\_1\ X1)\ (k3\_yellow\_1\ X1))\wedge(r5\_waybel\_1\ X0\ (k1\_yellow\_2\ (k3\_yellow\_1\ X1)\ (k3\_yellow\_1\ X1)\ X2))))))) \tag{3}$$

Theorem 1

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v1\_yellow\_0\ X0)\wedge(l1\_orders\_2\ X0)))))))\Rightarrow((\neg(v3\_waybel\_3\ X0)\wedge(\forall X1.(\neg v1\_xboole\_0\ X1)\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ (k3\_yellow\_1\ X1))\ (u1\_struct\_0\ (k3\_yellow\_1\ X1)))\wedge((v6\_waybel\_1\ X2\ (k3\_yellow\_1\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k3\_yellow\_1\ X1))\ (u1\_struct\_0\ (k3\_yellow\_1\ X1))))))))\Rightarrow(\neg(v22\_waybel\_0\ X2\ (k3\_yellow\_1\ X1)\ (k3\_yellow\_1\ X1))\wedge(r5\_waybel\_1\ X0\ (k1\_yellow\_2\ (k3\_yellow\_1\ X1)\ (k3\_yellow\_1\ X1)\ X2))))))\wedge((\exists X1.\exists X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ (k3\_yellow\_1\ X1))\ (u1\_struct\_0\ (k3\_yellow\_1\ X1)))\wedge((v6\_waybel\_1\ X2\ (k3\_yellow\_1\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k3\_yellow\_1\ X1))\ (u1\_struct\_0\ (k3\_yellow\_1\ X1))))))))\wedge((v22\_waybel\_0\ X2\ (k3\_yellow\_1\ X1)\ (k3\_yellow\_1\ X1))\wedge(r5\_waybel\_1\ X0\ (k1\_yellow\_2\ (k3\_yellow\_1\ X1)\ (k3\_yellow\_1\ X1)\ X2))))\Rightarrow(v3\_waybel\_3\ X0)))$$