t5_waybel_5 (TMKRaLoEsgSFrRyi2qEUxPxkLnEqEd3BzHq)

October 27, 2020

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 $v2\_lattice3 : \iota \Rightarrow o$ be given. Let $v3\_lattice3 : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v17\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_yellow\_2 : \iota \Rightarrow \iota$ be given. Let $k2\_yellow\_1 : \iota \Rightarrow \iota$ be given. Let $k7\_waybel\_0 : \iota \Rightarrow \iota$ be given. Let $v18\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ 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 $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r3\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_lattice3 : \iota \Rightarrow o$ be given. Let $v1\_yellow\_0 : \iota \Rightarrow o$ be given. Let $v1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v3\_yellow\_0 : \iota \Rightarrow o$ be given. Let $v2\_yellow\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge (l1\_orders\_2\ X0))))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v3\_orders\_2\ X1) \wedge ((v4\_orders\_2\ X1) \wedge ((v5\_orders\_2\ X1) \wedge (l1\_orders\_2\ X1))))) \Rightarrow (\forall X2.((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))) \Rightarrow (\neg(v3\_lattice3\ X0) \wedge ((v17\_waybel\_0\ X2\ X0\ X1) \wedge (\forall X3.((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2\ X3\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0)))))))) \Rightarrow (\neg(v3\_waybel\_1\ (k1\_waybel\_1\ X0\ X1\ X2\ X3)\ X0\ X1) \wedge (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X1)) \Rightarrow (r3\_waybel\_1\ X0\ (k3\_funct\_2\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0)\ X3\ X4)\ (k8\_relset\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)\ X2\ (k6\_waybel\_0\ X1\ X4))))))))))) \tag{1}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v1\_yellow\_0\ X0)\wedge(l1\_orders\_2\ X0))))))\Rightarrow((v1\_orders\_2\ (k2\_yellow\_1\ (k7\_waybel\_0\ X0)))\wedge(v3\_lattice3\ (k2\_yellow\_1\ (k7\_waybel\_0\ X0)))) \tag{2}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow((\neg v2\_struct\_0\ (k2\_yellow\_1\ X0))\wedge(v1\_orders\_2\ (k2\_yellow\_1\ X0))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_orders\_2\ (k2\_yellow\_1\ X0))\wedge((v3\_orders\_2\ (k2\_yellow\_1\ X0))\wedge((v4\_orders\_2\ (k2\_yellow\_1\ X0))\wedge(v5\_orders\_2\ (k2\_yellow\_1\ X0)))) \tag{4}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0))))\Rightarrow(\neg v1\_xboole\_0\ (k7\_waybel\_0\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0)))))\Rightarrow((v1\_funct\_1\ (k2\_yellow\_2\ X0))\wedge((v1\_funct\_2\ (k2\_yellow\_2\ X0)\ (u1\_struct\_0\ (k2\_yellow\_1\ (k7\_waybel\_0\ X0)))\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ (k2\_yellow\_2\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k2\_yellow\_1\ (k7\_waybel\_0\ X0)))\ (u1\_struct\_0\ X0)))))) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_orders\_2\ (k2\_yellow\_1\ X0))\wedge(l1\_orders\_2\ (k2\_yellow\_1\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge(l1\_orders\_2\ X1))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow((v4\_waybel\_1\ X2\ X0\ X1)\Leftrightarrow(\exists X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))))))\wedge(v3\_waybel\_1\ (k1\_waybel\_1\ X0\ X1\ X2\ X3)\ X0\ X1))))) \tag{8}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v3\_yellow\_0\ X0)\Rightarrow((v1\_yellow\_0\ X0)\wedge(v2\_yellow\_0\ X0))) \tag{9}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge(v3\_lattice3\ X0))\Rightarrow((\neg v2\_struct\_0\ X0)\wedge(v3\_yellow\_0\ X0))) \tag{10}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v2\_lattice3\ X0)\Rightarrow(\neg v2\_struct\_0\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge(v3\_lattice3\ X0))\Rightarrow((\neg v2\_struct\_0\ X0)\wedge((v1\_lattice3\ X0)\wedge(v2\_lattice3\ X0)))) \tag{12}$$

Theorem 1

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge(l1\_orders\_2\ X0)))))\Rightarrow(((v17\_waybel\_0\ (k2\_yellow\_2\ X0)\ (k2\_yellow\_1\ (k7\_waybel\_0\ X0))\ X0)\wedge(v18\_waybel\_0\ (k2\_yellow\_2\ X0)\ (k2\_yellow\_1\ (k7\_waybel\_0\ X0))\ X0))\Rightarrow(v4\_waybel\_1\ (k2\_yellow\_2\ X0)\ (k2\_yellow\_1\ (k7\_waybel\_0\ X0))\ X0))$$