l19_waybel15 (TMdMrnFj8u2jh26smrjbYt5pwLQttCTuoZH)

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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 $l1\_orders\_2 : \iota \Rightarrow o$ 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 $v3\_waybel\_3 : \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v3\_lattice3 : \iota \Rightarrow o$ be given. Let $v1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v4\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_waybel\_8 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge (l1\_orders\_2\ X0))))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v3\_orders\_2\ X1) \wedge ((v4\_orders\_2\ X1) \wedge ((v5\_orders\_2\ X1) \wedge (l1\_orders\_2\ X1))))) \Rightarrow (((r5\_waybel\_1\ X0\ X1) \wedge (v3\_waybel\_3\ X0)) \Rightarrow (v3\_waybel\_3\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge (l1\_orders\_2\ X0)) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge (l1\_orders\_2\ X1)) \Rightarrow ((r5\_waybel\_1\ X0\ X1) \Rightarrow (r5\_waybel\_1\ X1\ X0))) \tag{2}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge((v3\_waybel\_3\ X0)\wedge(l1\_orders\_2\ X0))))))))\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0))\wedge((v6\_waybel\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X0)))))))\Rightarrow((v22\_waybel\_0\ X1\ X0\ X0)\Rightarrow((v3\_orders\_2\ (k1\_yellow\_2\ X0\ X0\ X1))\wedge((v4\_orders\_2\ (k1\_yellow\_2\ X0\ X0\ X1))\wedge((v5\_orders\_2\ (k1\_yellow\_2\ X0\ X0\ X1))\wedge((v1\_lattice3\ (k1\_yellow\_2\ X0\ X0\ X1))\wedge((v2\_lattice3\ (k1\_yellow\_2\ X0\ X0\ X1))\wedge((v3\_waybel\_3\ (k1\_yellow\_2\ X0\ X0\ X1))\wedge(l1\_orders\_2\ (k1\_yellow\_2\ X0\ X0\ X1))))))))))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_orders\_2\ (k3\_yellow\_1\ X0))\wedge(v3\_lattice3\ (k3\_yellow\_1\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.(\neg v2\_struct\_0\ (k3\_yellow\_1\ X0))\wedge((v1\_orders\_2\ (k3\_yellow\_1\ X0))\wedge((v3\_orders\_2\ (k3\_yellow\_1\ X0))\wedge((v4\_orders\_2\ (k3\_yellow\_1\ X0))\wedge(v5\_orders\_2\ (k3\_yellow\_1\ X0))))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\wedge(((\neg v2\_struct\_0\ X1)\wedge(l1\_orders\_2\ X1))\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))))\Rightarrow((\neg v2\_struct\_0\ (k1\_yellow\_2\ X0\ X1\ X2))\wedge((v1\_orders\_2\ (k1\_yellow\_2\ X0\ X1\ X2))\wedge(v4\_yellow\_0\ (k1\_yellow\_2\ X0\ X1\ X2)\ X1))) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_orders\_2\ (k3\_yellow\_1\ X0))\wedge(v2\_waybel\_8\ (k3\_yellow\_1\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(v1\_orders\_2\ (k3\_yellow\_1\ X0))\wedge(l1\_orders\_2\ (k3\_yellow\_1\ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge(v3\_lattice3\ X0))\Rightarrow((\neg v2\_struct\_0\ X0)\wedge((v1\_lattice3\ X0)\wedge(v2\_lattice3\ X0)))) \tag{9}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0) \Rightarrow (((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v1\_lattice3\ X0) \wedge ((v2\_lattice3\ X0) \wedge (v2\_waybel\_8\ X0)))))) \Rightarrow ((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v1\_lattice3\ X0) \wedge ((v2\_lattice3\ X0) \wedge (v3\_waybel\_3\ X0)))))))) \tag{10}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0) \Rightarrow ((v1\_lattice3\ X0) \Rightarrow (\neg v2\_struct\_0\ X0)) \tag{11}$$

Theorem 1

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