# t33_waybel_4 (TMLUXx5jj85UE9ybAbyUELpL8LW9bvUjJES)

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 $v1\_yellow\_0 : \iota \Rightarrow o$ be given. Let $v1\_lattice3 : \iota \Rightarrow o$ be given. Let $l1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v23\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_waybel\_4 : \iota \Rightarrow \iota$ be given. Let $k2\_yellow\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_waybel\_4 : \iota \Rightarrow \iota$ be given. Let $k8\_waybel\_4 : \iota \Rightarrow \iota$ be given. Let $k2\_funct\_1 : \iota \Rightarrow \iota$ be given. Let $k10\_waybel\_4 : \iota \Rightarrow \iota$ be given. Let $v1\_orders\_2 : \iota \Rightarrow o$ be given. Let $v2\_lattice3 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v2\_funct\_1 : \iota \Rightarrow o$ 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 $v5\_orders\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ 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. Assume the following.

$$\forall X0.((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v1\_yellow\_0\ X0) \wedge ((v1\_lattice3\ X0) \wedge (l1\_orders\_2\ X0)))))) \Rightarrow (k2\_funct\_1\ (k9\_waybel\_4\ X0) = k10\_waybel\_4\ X0) \tag{1}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v1\_yellow\_0\ X0) \wedge ((v1\_lattice3\ X0) \wedge (l1\_orders\_2\ X0)))))) \Rightarrow ((v1\_orders\_2\ (k2\_yellow\_1\ (k3\_waybel\_4\ X0))) \wedge (v2\_lattice3\ (k2\_yellow\_1\ (k3\_waybel\_4\ X0)))) \tag{2}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0) \wedge ((v4\_orders\_2\ X0) \wedge ((v5\_orders\_2\ X0) \wedge ((v1\_yellow\_0\ X0) \wedge ((v1\_lattice3\ X0) \wedge (l1\_orders\_2\ X0)))))) \Rightarrow ((v1\_funct\_1\ (k9\_waybel\_4\ X0)) \wedge ((v2\_funct\_1\ (k9\_waybel\_4\ X0)) \wedge (v1\_funct\_2\ (k9\_waybel\_4\ X0)\ (u1\_struct\_0\ (k2\_yellow\_1\ (k3\_waybel\_4\ X0)))\ (u1\_struct\_0\ (k8\_waybel\_4\ X0))))) \tag{3}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_yellow\_0\ X0)\wedge((v1\_lattice3\ X0)\wedge(l1\_orders\_2\ X0))))))\Rightarrow((v1\_funct\_1\ (k10\_waybel\_4\ X0))\wedge((v1\_funct\_2\ (k10\_waybel\_4\ X0)\ (u1\_struct\_0\ (k8\_waybel\_4\ X0))\ (u1\_struct\_0\ (k2\_yellow\_1\ (k3\_waybel\_4\ X0))))\wedge(v5\_orders\_3\ (k10\_waybel\_4\ X0)\ (k8\_waybel\_4\ X0)\ (k2\_yellow\_1\ (k3\_waybel\_4\ X0)))))) \tag{4}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_yellow\_0\ X0)\wedge((v1\_lattice3\ X0)\wedge(l1\_orders\_2\ X0))))))\Rightarrow((v1\_funct\_1\ (k9\_waybel\_4\ X0))\wedge((v1\_funct\_2\ (k9\_waybel\_4\ X0)\ (u1\_struct\_0\ (k2\_yellow\_1\ (k3\_waybel\_4\ X0)))\ (u1\_struct\_0\ (k8\_waybel\_4\ X0)))\wedge(v5\_orders\_3\ (k9\_waybel\_4\ X0)\ (k2\_yellow\_1\ (k3\_waybel\_4\ X0))\ (k8\_waybel\_4\ X0)))) \tag{5}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_yellow\_0\ X0)\wedge((v1\_lattice3\ X0)\wedge(l1\_orders\_2\ X0))))))\Rightarrow((\neg v2\_struct\_0\ (k8\_waybel\_4\ X0))\wedge(v1\_orders\_2\ (k8\_waybel\_4\ X0))) \tag{6}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_yellow\_0\ X0)\wedge((v1\_lattice3\ X0)\wedge(l1\_orders\_2\ X0))))))\Rightarrow((v1\_funct\_1\ (k9\_waybel\_4\ X0))\wedge((v1\_funct\_2\ (k9\_waybel\_4\ X0)\ (u1\_struct\_0\ (k2\_yellow\_1\ (k3\_waybel\_4\ X0)))\ (u1\_struct\_0\ (k8\_waybel\_4\ X0)))\wedge(m1\_subset\_1\ (k9\_waybel\_4\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k2\_yellow\_1\ (k3\_waybel\_4\ X0)))\ (u1\_struct\_0\ (k8\_waybel\_4\ X0))))))) \tag{7}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0)))))\Rightarrow((v1\_orders\_2\ (k8\_waybel\_4\ X0))\wedge(l1\_orders\_2\ (k8\_waybel\_4\ X0))) \tag{8}$$

Assume the following.

$$\forall X0.(v1\_orders\_2\ (k2\_yellow\_1\ X0))\wedge(l1\_orders\_2\ (k2\_yellow\_1\ X0)) \tag{9}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_yellow\_0\ X0)\wedge((v1\_lattice3\ X0)\wedge(l1\_orders\_2\ X0))))))\Rightarrow((v1\_funct\_1\ (k10\_waybel\_4\ X0))\wedge((v1\_funct\_2\ (k10\_waybel\_4\ X0)\ (u1\_struct\_0\ (k8\_waybel\_4\ X0))\ (u1\_struct\_0\ (k2\_yellow\_1\ (k3\_waybel\_4\ X0))))\wedge(m1\_subset\_1\ (k10\_waybel\_4\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k8\_waybel\_4\ X0))\ (u1\_struct\_0\ (k2\_yellow\_1\ (k3\_waybel\_4\ X0)))))))) \tag{10}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(\forall X1.(l1\_orders\_2\ X1)\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow((\neg(\neg v2\_struct\_0\ X0)\wedge((\neg v2\_struct\_0\ X1)\wedge(\neg(v23\_waybel\_0\ X2\ X0\ X1)\Leftrightarrow((v2\_funct\_1\ X2)\wedge((v5\_orders\_3\ X2\ X0\ X1)\wedge(\exists X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X0))))))\wedge((X3 = k2\_funct\_1\ X2)\wedge(v5\_orders\_3\ X3\ X1\ X0))))))))\wedge((\neg(\neg v2\_struct\_0\ X0)\wedge(\neg v2\_struct\_0\ X1))\Rightarrow((v23\_waybel\_0\ X2\ X0\ X1)\Leftrightarrow((v2\_struct\_0\ X0)\wedge(v2\_struct\_0\ X1))))))) \tag{11}$$

Assume the following.

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

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v1\_lattice3\ X0)\Rightarrow(\neg v2\_struct\_0\ X0)) \tag{13}$$

**Theorem 1**

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_yellow\_0\ X0)\wedge((v1\_lattice3\ X0)\wedge(l1\_orders\_2\ X0))))))\Rightarrow(v23\_waybel\_0\ (k9\_waybel\_4\ X0)\ (k2\_yellow\_1\ (k3\_waybel\_4\ X0))\ (k8\_waybel\_4\ X0))$$