# t32_waybel34 (TMGu6TP19Vs9Y1Vfjvcq5RXjF1pruz3axBR)

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 $v1\_lattice3 : \iota \Rightarrow o$ 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 $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v4\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v8\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $r1\_waybel\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v2\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $r2\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v4\_orders\_2\ X0) \wedge (l1\_orders\_2\ X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0\ X1) \wedge ((v4\_yellow\_0\ X1\ X0) \wedge (m1\_yellow\_0\ X1\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1))) \Rightarrow (((r1\_yellow\_0\ X0\ X2) \wedge (k1\_yellow\_0\ X0\ X2 \in u1\_struct\_0\ X1)) \Rightarrow ((r1\_yellow\_0\ X1\ X2) \wedge (k1\_yellow\_0\ X1\ X2 = k1\_yellow\_0\ X0\ X2))))) \tag{2}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(\forall X1.((v4\_yellow\_0\ X1\ X0)\wedge (m1\_yellow\_0\ X1\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X1))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X1))\Rightarrow(((X4 = X2)\wedge((X5 = X3)\wedge((r1\_orders\_2\ X0\ X2\ X3)\wedge (X4 \in u1\_struct\_0\ X1))))\Rightarrow(r1\_orders\_2\ X1\ X4\ X5)))))))) \tag{3}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow(\forall X1.(m1\_yellow\_0\ X1\ X0)\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X1))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X1))\Rightarrow(((X4 = X2)\wedge ((X5 = X3)\wedge(r1\_orders\_2\ X1\ X4\ X5)))\Rightarrow(r1\_orders\_2\ X0\ X2\ X3))))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2)))\Rightarrow(m1\_subset\_1\ X0\ X2) \tag{5}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge (l1\_orders\_2\ X0)))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v4\_yellow\_0\ X1\ X0)\wedge((v8\_yellow\_0\ X1\ X0)\wedge(m1\_yellow\_0\ X1\ X0))))\Rightarrow((v3\_orders\_2\ X1)\wedge((v4\_orders\_2\ X1)\wedge((v5\_orders\_2\ X1)\wedge((v1\_lattice3\ X1)\wedge ((v2\_lattice3\ X1)\wedge((v3\_lattice3\ X1)\wedge(l1\_orders\_2\ X1)))))))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1)\Rightarrow((v1\_xboole\_0\ X1)\vee (X0 \in X1)) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1)\Rightarrow(m1\_subset\_1\ X0\ X1) \tag{8}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v3\_lattice3\ X0)\wedge(l1\_orders\_2\ X0))))\Rightarrow(\forall X1.(r1\_yellow\_0\ X0\ X1)\wedge(r2\_yellow\_0\ X0\ X1)) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0)))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\wedge(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))))\Rightarrow((r3\_orders\_2\ X0\ X1\ X2)\Leftrightarrow(r1\_orders\_2\ X0\ X1\ X2)) \tag{10}$$

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.

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

Assume the following.

$$\forall X0.\forall X1.(l1\_orders\_2\ X0)\Rightarrow(m1\_subset\_1\ (k1\_yellow\_0\ X0\ X1)\ (u1\_struct\_0\ X0)) \tag{13}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0)))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow((r1\_waybel\_3\ X0\ X1\ X2)\Leftrightarrow(\forall X3.((\neg v1\_xboole\_0\ X3)\wedge((v1\_waybel\_0\ X3\ X0)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))))\Rightarrow(\neg(r3\_orders\_2\ X0\ X2\ (k1\_yellow\_0\ X0\ X3))\wedge(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\Rightarrow(\neg(X4\in X3)\wedge(r3\_orders\_2\ X0\ X1\ X4)))))))) \tag{14}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.(m1\_yellow\_0\ X1\ X0)\Rightarrow((v8\_yellow\_0\ X1\ X0)\Leftrightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X1)))\Rightarrow((r1\_yellow\_0\ X0\ X2)\Rightarrow(k1\_yellow\_0\ X0\ X2\in u1\_struct\_0\ X1))))) \tag{15}$$

Assume the following.

$$\forall X0.((v3\_orders\_2\ X0)\wedge(l1\_orders\_2\ X0))\Rightarrow(\forall X1.(m1\_yellow\_0\ X1\ X0)\Rightarrow((v4\_yellow\_0\ X1\ X0)\Rightarrow((v3\_orders\_2\ X1)\wedge(v4\_yellow\_0\ X1\ X0)))) \tag{16}$$

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v1\_lattice3\ X0)\Rightarrow(\neg v2\_struct\_0\ X0)) \tag{17}$$

**Theorem 1**

$$\forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge(l1\_orders\_2\ X0)))))))\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v4\_yellow\_0\ X1\ X0)\wedge((v8\_yellow\_0\ X1\ X0)\wedge(m1\_yellow\_0\ X1\ X0))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X1))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X1))\Rightarrow(((X4=X2)\wedge((X5=X3)\wedge(r1\_waybel\_3\ X0\ X2\ X3)))\Rightarrow(r1\_waybel\_3\ X1\ X4\ X5)))))))$$