

## t39\_waybel19

(TML69EqWdKEF3pdHg2SqrEnkQkmt51DTZbk)

October 27, 2020

Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. 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  $v2\_waybel19 : \iota \Rightarrow o$  be given. Let  $l1\_waybel\_9 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v2\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v2\_pre\_topc X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\ & X0) \wedge ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge \\ & ((v3\_lattice3 X0) \wedge ((v2\_waybel19 X0) \wedge (l1\_waybel\_9 X0)))))))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v4\_pre\_topc \\ & (k6\_waybel\_0 X0 X1) X0) \wedge ((v4\_pre\_topc (k5\_waybel\_0 X0 X1) X0) \wedge \\ & (v4\_pre\_topc (k6\_domain\_1 (u1\_struct\_0 X0) X1) X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge \\ & (l1\_orders\_2 X0))) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 X0))) \Rightarrow ((\neg v1\_xboole\_0 \\ & (k6\_waybel\_0 X0 X1)) \wedge (v2\_waybel\_0 (k6\_waybel\_0 X0 X1) X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \wedge \\ & ((v4\_pre\_topc X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0)))) \Rightarrow (v3\_pre\_topc (k3\_subset\_1 (u1\_struct\_0 X0) X1) X0) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(l1\_waybel\_9 X0) \Rightarrow ((l1\_pre\_topc X0) \wedge (l1\_orders\_2 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2\_struct\_0 X0)\wedge(l1\_orders\_2 X0))\wedge \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)))\Rightarrow(m1\_subset\_1 (k6\_waybel\_0 \\ & X0 X1) (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge(m1\_subset\_1 X1 X0))\Rightarrow \\ & (m1\_subset\_1 (k6\_domain\_1 X0 X1) (k1\_zfmisc\_1 X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2\_struct\_0 X0)\wedge(l1\_orders\_2 X0))\wedge \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)))\Rightarrow(m1\_subset\_1 (k5\_waybel\_0 \\ & X0 X1) (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & X0))\Rightarrow(v1\_xboole\_0 X1)) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0)\Rightarrow((v1\_lattice3 X0)\Rightarrow(\neg v2\_struct\_0 X0)) \quad (9)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v2\_pre\_topc X0)\wedge((v3\_orders\_2 X0)\wedge((v4\_orders\_2 \\ & X0)\wedge((v5\_orders\_2 X0)\wedge((v1\_lattice3 X0)\wedge((v2\_lattice3 X0)\wedge \\ & ((v3\_lattice3 X0)\wedge((v2\_waybel19 X0)\wedge(l1\_waybel\_9 X0))))))))\Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0))\Rightarrow((v3\_pre\_topc \\ & (k3\_subset\_1 (u1\_struct\_0 X0) (k6\_waybel\_0 X0 X1)) X0)\wedge((v3\_pre\_topc \\ & (k3\_subset\_1 (u1\_struct\_0 X0) (k5\_waybel\_0 X0 X1)) X0)\wedge(v3\_pre\_topc \\ & (k3\_subset\_1 (u1\_struct\_0 X0) (k6\_domain\_1 (u1\_struct\_0 X0) X1)) \\ & X0)))) \end{aligned}$$