

## t19\_waybel25

(TMbv9WDmj1VGxbqVi82tys6vpyy4VT3ZwLv)

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Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $r1\_borsuk\_3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r5\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_waybel25 : \iota \Rightarrow \iota$  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  $v3\_tops\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v23\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_t\_0topsp : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_waybel\_9 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_waybel\_9 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\
 & ((v2\_pre\_topc X1) \wedge (l1\_pre\_topc X1)) \Rightarrow (\forall X2.((v1\_funct\_1 \\
 & X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 \\
 & X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \Rightarrow \\
 & (\forall X3.((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 (u1\_struct\_0 (k1\_waybel25 \\
 & X0)) (u1\_struct\_0 (k1\_waybel25 X1))) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\
 & (k2\_zfmisc\_1 (u1\_struct\_0 (k1\_waybel25 X0)) (u1\_struct\_0 (k1\_waybel25 \\
 & X1)))))) \Rightarrow ((X2 = X3) \wedge (v3\_tops\_2 X2 X0 X1)) \Rightarrow (v23\_waybel\_0 X3 ( \\
 & k1\_waybel25 X0) (k1\_waybel25 X1))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((l1\_pre\_topc X0) \wedge (l1\_pre\_topc X1)) \Rightarrow (r1\_borsuk\_3 X0 X1) \Leftrightarrow (r1\_t\_0topsp X0 X1) \tag{2}$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow (u1\_struct\_0 X0 = u1\_struct\_0 (k1\_waybel25 X0)) \tag{3}$$

Assume the following.

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

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0)\Rightarrow((v1\_waybel\_9\ (k1\_waybel25\ X0))\wedge (l1\_waybel\_9\ (k1\_waybel25\ X0))) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_orders\_2\ X0)\Rightarrow(\forall X1.(l1\_orders\_2\ X1)\Rightarrow(( \\ r5\_waybel\_1\ X0\ X1)\Leftrightarrow(\exists X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2 \\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\wedge(v23\_waybel\_0 \\ X2\ X0\ X1)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_pre\_topc\ X0)\Rightarrow(\forall X1.(l1\_pre\_topc\ X1)\Rightarrow(( \\ r1\_t\_0topsp\ X0\ X1)\Leftrightarrow(\exists X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2 \\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\wedge(v3\_tops\_2 \\ X2\ X0\ X1)))) \end{aligned} \quad (7)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc\ X0))\Rightarrow(\forall X1. \\ ((v2\_pre\_topc\ X1)\wedge(l1\_pre\_topc\ X1))\Rightarrow((r1\_borsuk\_3\ X0\ X1)\Rightarrow(r5\_waybel\_1 \\ (k1\_waybel25\ X0)\ (k1\_waybel25\ X1)))) \end{aligned}$$