

## t34\_waybel27

(TMYm96UoN9GZAAG7wq6DSvvTJcXsMf9UCuJ)

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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  $v3\_lattice3 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $r5\_waybel\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_waybel27 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_yellow\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k2\_yellow\_1 : \iota \Rightarrow \iota$  be given. Let  $k5\_waybel11 : \iota \Rightarrow \iota$  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  $v23\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v22\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_orders\_2 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\
 & X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge ((v3\_lattice3 X0) \wedge \\
 & (l1\_orders\_2 X0)))))) \Rightarrow (\exists X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 \\
 & X1 (u1\_struct\_0 (k2\_waybel27 X0 (k3\_yellow\_1 np\_1))) (u1\_struct\_0 \\
 & (k2\_yellow\_1 (k5\_waybel11 X0)))) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\
 & (k2\_zfmisc\_1 (u1\_struct\_0 (k2\_waybel27 X0 (k3\_yellow\_1 np\_1))) \\
 & (u1\_struct\_0 (k2\_yellow\_1 (k5\_waybel11 X0)))))) \wedge ((v23\_waybel\_0 \\
 & X1 (k2\_waybel27 X0 (k3\_yellow\_1 np\_1)) (k2\_yellow\_1 (k5\_waybel11 \\
 & X0))) \wedge (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 \\
 & X0) (u1\_struct\_0 (k3\_yellow\_1 np\_1))) \wedge ((v22\_waybel\_0 X2 X0 ( \\
 & k3\_yellow\_1 np\_1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
 & (u1\_struct\_0 X0) (u1\_struct\_0 (k3\_yellow\_1 np\_1)))))) \Rightarrow (k1\_funct\_1 \\
 & X1 X2 = k8\_relset\_1 (u1\_struct\_0 X0) (u1\_struct\_0 (k3\_yellow\_1 \\
 & np\_1)) X2 (k1\_tarski np\_1))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v2\_struct\_0 (k3\_yellow\_1 X0)) \wedge ((v1\_orders\_2 (k3\_yellow\_1 \\
 & X0)) \wedge ((v3\_orders\_2 (k3\_yellow\_1 X0)) \wedge ((v4\_orders\_2 (k3\_yellow\_1 \\
 & X0)) \wedge (v5\_orders\_2 (k3\_yellow\_1 X0))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(v1\_orders\_2 (k3\_yellow\_1 X0)) \wedge (l1\_orders\_2 (k3\_yellow\_1 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_orders\_2 (k2\_yellow\_1 X0)) \wedge (l1\_orders\_2 (k2\_yellow\_1 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \wedge \\ & ((\neg v2\_struct\_0 X1) \wedge (v3\_orders\_2 X1) \wedge (v5\_orders\_2 X1) \wedge (l1\_orders\_2 \\ & X1)))) \Rightarrow ((v1\_orders\_2 (k2\_waybel27 X0 X1)) \wedge (l1\_orders\_2 (k2\_waybel27 \\ & X0 X1))) \end{aligned} \quad (5)$$

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.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow ((v1\_lattice3 X0) \Rightarrow (\neg v2\_struct\_0 X0)) \quad (7)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ & X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge ((v3\_lattice3 X0) \wedge \\ & (l1\_orders\_2 X0)))))) \Rightarrow (r5\_waybel\_1 (k2\_waybel27 X0 (k3\_yellow\_1 \\ & np\_1)) (k2\_yellow\_1 (k5\_waybel11 X0))) \end{aligned}$$