

## t22\_waybel17

(TMW6Zv8NwcQHr3nPwhPySdFgwJqa7PntBRD)

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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  $v4\_waybel11 : \iota \Rightarrow o$  be given. Let  $l1\_waybel\_9 : \iota \Rightarrow o$  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  $v5\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v22\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v24\_waybel\_0 : \iota \Rightarrow o$  be given. Let  $v7\_waybel\_0 : \iota \Rightarrow o$  be given. Let  $l1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_waybel11 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_waybel\_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v25\_waybel\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge ((v3\_orders\_2 \\
 & X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 X0) \wedge ((v24\_waybel\_0 X0) \wedge \\
 & ((v4\_waybel11 X0) \wedge (l1\_waybel\_9 X0))))))) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 \\
 & X1) \wedge ((v2\_pre\_topc X1) \wedge ((v3\_orders\_2 X1) \wedge ((v4\_orders\_2 X1) \wedge \\
 & ((v5\_orders\_2 X1) \wedge ((v24\_waybel\_0 X1) \wedge ((v4\_waybel11 X1) \wedge (l1\_waybel\_9 \\
 & X1))))))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 \\
 & X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
 & (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \Rightarrow ((v22\_waybel\_0 X2 X0 X1) \Rightarrow \\
 & (v5\_pre\_topc X2 X0 X1)))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2\_pre\_topc\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge \\
& ((v3\_lattice3\ X0)\wedge((v4\_waybel11\ X0)\wedge(l1\_waybel\_9\ X0))))))))\Rightarrow \\
& (\forall X1.((v2\_pre\_topc\ X1)\wedge((v3\_orders\_2\ X1)\wedge((v4\_orders\_2\ X1)\wedge((v5\_orders\_2\ X1)\wedge((v1\_lattice3\ X1)\wedge((v2\_lattice3\ X1)\wedge \\
& ((v3\_lattice3\ X1)\wedge((v4\_waybel11\ X1)\wedge(l1\_waybel\_9\ X1))))))))\Rightarrow \\
& (\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0) \\
& (u1\_struct\_0\ X1))\wedge((v5\_pre\_topc\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow(\forall X3. \\
& ((\neg v2\_struct\_0\ X3)\wedge((v4\_orders\_2\ X3)\wedge((v7\_waybel\_0\ X3)\wedge(l1\_waybel\_0 \\
& X3\ X0))))\Rightarrow(r3\_orders\_2\ X1\ (k3\_funct\_2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0 \\
& X1)\ X2\ (k1\_waybel11\ X0\ X3))\ (k1\_waybel11\ X1\ (k6\_waybel\_9\ X0\ X1\ X2 \\
& X3))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v3\_orders\_2\ X0)\wedge((v4\_orders\_2\ X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge((v3\_lattice3\ X0)\wedge \\
& (l1\_orders\_2\ X0))))))\Rightarrow(\forall X1.((v3\_orders\_2\ X1)\wedge((v4\_orders\_2\ X1)\wedge((v5\_orders\_2\ X1)\wedge((v1\_lattice3\ X1)\wedge((v2\_lattice3\ X1)\wedge \\
& ((v3\_lattice3\ X1)\wedge(l1\_orders\_2\ X1))))))\Rightarrow(\forall X2.((v1\_funct\_1 \\
& X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))\wedge(m1\_subset\_1 \\
& X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow \\
& ((\forall X3.((\neg v2\_struct\_0\ X3)\wedge((v4\_orders\_2\ X3)\wedge((v7\_waybel\_0 \\
& X3)\wedge(l1\_waybel\_0\ X3\ X0))))\Rightarrow(r3\_orders\_2\ X1\ (k3\_funct\_2\ (u1\_struct\_0 \\
& X0)\ (u1\_struct\_0\ X1)\ X2\ (k1\_waybel11\ X0\ X3))\ (k1\_waybel11\ X1\ (k6\_waybel\_9 \\
& X0\ X1\ X2\ X3))))\Rightarrow(v22\_waybel\_0\ X2\ X0\ X1)))
\end{aligned} \tag{3}$$

Assume the following.

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

Assume the following.

$$\forall X0.(l1\_orders\_2\ X0)\Rightarrow((v1\_lattice3\ X0)\Rightarrow(\neg v2\_struct\_0\ X0)) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1\_orders\_2\ X0)\Rightarrow(((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2 \\
& X0)\wedge(v3\_lattice3\ X0)))\Rightarrow((\neg v2\_struct\_0\ X0)\wedge((v3\_orders\_2\ X0)\wedge \\
& ((v24\_waybel\_0\ X0)\wedge(v25\_waybel\_0\ X0))))
\end{aligned} \tag{6}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v2\_pre\_topc\ X0)\wedge((v3\_orders\_2\ X0)\wedge((v4\_orders\_2 \\ & X0)\wedge((v5\_orders\_2\ X0)\wedge((v1\_lattice3\ X0)\wedge((v2\_lattice3\ X0)\wedge \\ & ((v3\_lattice3\ X0)\wedge((v4\_waybel11\ X0)\wedge(l1\_waybel\_9\ X0))))))))\Rightarrow \\ & (\forall X1.((v2\_pre\_topc\ X1)\wedge((v3\_orders\_2\ X1)\wedge((v4\_orders\_2 \\ & X1)\wedge((v5\_orders\_2\ X1)\wedge((v1\_lattice3\ X1)\wedge((v2\_lattice3\ X1)\wedge \\ & ((v3\_lattice3\ X1)\wedge((v4\_waybel11\ X1)\wedge(l1\_waybel\_9\ X1))))))))\Rightarrow \\ & (\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ X0) \\ & (u1\_struct\_0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1 \\ & (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1))))))\Rightarrow((v5\_pre\_topc\ X2\ X0\ X1)\Leftrightarrow \\ & (v22\_waybel\_0\ X2\ X0\ X1))) \end{aligned}$$