

## t25\_waybel\_7

(TMSr9o941wZw3rGwYrAVkTvdUXCkkf79BaR)

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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  $v2\_waybel\_1 : \iota \Rightarrow o$  be given. Let  $v1\_lattice3 : \iota \Rightarrow o$  be given. Let  $v2\_lattice3 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v12\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v2\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v13\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_waybel\_7 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_lattice3 : \iota \Rightarrow \iota$  be given. Let  $v1\_waybel\_7 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_orders\_2 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.((v12\_waybel\_0 X1 (k7\_lattice3 \\ X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 (k7\_lattice3 \\ X0)))))) \Leftrightarrow ((v13\_waybel\_0 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 ( \\ u1\_struct\_0 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.((v12\_waybel\_0 X1 X0) \wedge \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Leftrightarrow ((v13\_waybel\_0 \\ X1 (k7\_lattice3 X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ (k7\_lattice3 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.((v1\_waybel\_0 X1 (k7\_lattice3 \\ X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 (k7\_lattice3 \\ X0)))))) \Leftrightarrow ((v2\_waybel\_0 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.((v1\_waybel\_0 X1 X0) \wedge \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Leftrightarrow ((v2\_waybel\_0 \\ X1 (k7\_lattice3 X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ (k7\_lattice3 X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\
& X0) \wedge ((v2\_waybel\_1 X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge \\
& (l1\_orders\_2 X0)))))) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge ((v1\_waybel\_0 \\
& X1 X0) \wedge ((v12\_waybel\_0 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& X0)))))) \Rightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge ((v2\_waybel\_0 X2 X0) \wedge \\
& (v13\_waybel\_0 X2 X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& X0)))))) \Rightarrow (\neg(r1\_subset\_1 X1 X2) \wedge (\forall X3.((\neg v1\_xboole\_0 X3) \wedge \\
& ((v1\_waybel\_0 X3 X0) \wedge ((v12\_waybel\_0 X3 X0) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\
& (u1\_struct\_0 X0)))))) \Rightarrow (\neg(v1\_waybel\_7 X3 X0) \wedge ((r1\_tarski X1 X3) \wedge \\
& (r1\_subset\_1 X3 X2))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\
& X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge (l1\_orders\_2 X0)))))) \Rightarrow \\
& (\forall X1.((\neg v1\_xboole\_0 X1) \wedge ((v2\_waybel\_0 X1 X0) \wedge ((v13\_waybel\_0 \\
& X1 X0) \wedge ((v2\_waybel\_7 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& X0)))))) \Leftrightarrow ((\neg v1\_xboole\_0 X1) \wedge ((v1\_waybel\_0 X1 (k7\_lattice3 \\
& X0)) \wedge ((v12\_waybel\_0 X1 (k7\_lattice3 X0)) \wedge ((v1\_waybel\_7 X1 (k7\_lattice3 \\
& X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 (k7\_lattice3 \\
& X0))))))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge (\neg v1\_xboole\_0 X1)) \Rightarrow \\
& ((r1\_subset\_1 X0 X1) \Rightarrow (r1\_subset\_1 X1 X0))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\
& X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge ((v2\_waybel\_1 X0) \wedge \\
& (l1\_orders\_2 X0)))))) \Rightarrow ((v1\_orders\_2 (k7\_lattice3 X0)) \wedge (v2\_waybel\_1 \\
& (k7\_lattice3 X0)))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_lattice3 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow ((v1\_orders\_2 \\
& (k7\_lattice3 X0)) \wedge (v2\_lattice3 (k7\_lattice3 X0)))
\end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v2\_lattice3 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow ((v1\_orders\_2 \\
& (k7\_lattice3 X0)) \wedge (v1\_lattice3 (k7\_lattice3 X0)))
\end{aligned} \tag{10}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v5\_orders\_2 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow ((v1\_orders\_2 \\
& (k7\_lattice3 X0)) \wedge (v5\_orders\_2 (k7\_lattice3 X0)))
\end{aligned} \tag{11}$$

Assume the following.

$$\forall X0.((v4\_orders\_2 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow ((v1\_orders\_2 (k7\_lattice3 X0)) \wedge (v4\_orders\_2 (k7\_lattice3 X0))) \quad (12)$$

Assume the following.

$$\forall X0.((v3\_orders\_2 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow ((v1\_orders\_2 (k7\_lattice3 X0)) \wedge (v3\_orders\_2 (k7\_lattice3 X0))) \quad (13)$$

Assume the following.

$$\forall X0.(l1\_orders\_2 X0) \Rightarrow ((v1\_orders\_2 (k7\_lattice3 X0)) \wedge (l1\_orders\_2 (k7\_lattice3 X0))) \quad (14)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 X0) \wedge ((v2\_waybel\_1 X0) \wedge ((v1\_lattice3 X0) \wedge ((v2\_lattice3 X0) \wedge (l1\_orders\_2 X0))))))) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge ((v1\_waybel\_0 X1 X0) \wedge ((v12\_waybel\_0 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))))) \Rightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge ((v2\_waybel\_0 X2 X0) \wedge ((v13\_waybel\_0 X2 X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))))) \Rightarrow (\neg(r1\_subset\_1 X1 X2) \wedge (\forall X3.((\neg v1\_xboole\_0 X3) \wedge ((v2\_waybel\_0 X3 X0) \wedge ((v13\_waybel\_0 X3 X0) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))))) \Rightarrow (\neg(v2\_waybel\_7 X3 X0) \wedge ((r1\_tarski X2 X3) \wedge (r1\_subset\_1 X1 X3)))))) \end{aligned}$$