

## t21\_waybel23

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v4\_orders\_2 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v3\_waybel23 : \iota \Rightarrow \iota \Rightarrow o$  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  $r2\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_orders\_2 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v4\_orders\_2 X0) \wedge (l1\_orders\_2 \\ & X0))) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v4\_yellow\_0 X1 X0) \wedge ( \\ & m1\_yellow\_0 X1 X0))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X1))) \Rightarrow (((r2\_yellow\_0 X0 X2) \wedge (k2\_yellow\_0 X0 X2 \in \\ & u1\_struct\_0 X1)) \Rightarrow ((r2\_yellow\_0 X1 X2) \wedge (k2\_yellow\_0 X1 X2 = k2\_yellow\_0 \\ & X0 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((v3\_waybel23 \\ & X1 X0) \Leftrightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 X1)) \Rightarrow ((r2\_yellow\_0 \\ & X0 X2) \Rightarrow (k2\_yellow\_0 X0 X2 \in X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \wedge \\ & ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0)))))) \Rightarrow ((\neg v2\_struct\_0 (k5\_yellow\_0 X0 X1)) \wedge ((v1\_orders\_2 ( \\ & k5\_yellow\_0 X0 X1)) \wedge (v4\_yellow\_0 (k5\_yellow\_0 X0 X1) X0))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((l1\_orders\_2 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))) \Rightarrow ((v1\_orders\_2 (k5\_yellow\_0 X0 X1)) \wedge ((v4\_yellow\_0 \\ & (k5\_yellow\_0 X0 X1) X0) \wedge (m1\_yellow\_0 (k5\_yellow\_0 X0 X1) X0))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_orders\_2 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0))) \Rightarrow (\forall X2.((v1\_orders\_2 X2) \wedge ((v4\_yellow\_0 \\ X2 X0) \wedge (m1\_yellow\_0 X2 X0))) \Rightarrow ((X2 = k5\_yellow\_0 X0 X1) \Leftrightarrow (u1\_struct\_0 \\ X2 = X1)))) \end{aligned} \tag{5}$$

**Theorem 1**

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v4\_orders\_2 X0) \wedge (l1\_orders\_2 \\ X0))) \Rightarrow (\forall X1.((\neg v1\_xboole\_0 X1) \wedge ((v3\_waybel23 X1 X0) \wedge ( \\ m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \Rightarrow (\forall X2. \\ (m1\_subset\_1 X2 (k1\_zfmisc\_1 X1)) \Rightarrow ((r2\_yellow\_0 X0 X2) \Rightarrow ((r2\_yellow\_0 \\ (k5\_yellow\_0 X0 X1) X2) \wedge (k2\_yellow\_0 (k5\_yellow\_0 X0 X1) X2 = k2\_yellow\_0 \\ X0 X2)))) \end{aligned}$$