

## t33\_waybel23

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v2\_waybel23 : \iota \Rightarrow \iota \Rightarrow o$  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  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((v2\_waybel23 \\ & X1 X0) \Leftrightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (((X2 \in X1) \wedge ((X3 \in X1) \wedge (r1\_yellow\_0 \\ & X0 (k7\_domain\_1 (u1\_struct\_0 X0) X2 X3)))) \Rightarrow (k1\_yellow\_0 X0 (k7\_domain\_1 \\ & (u1\_struct\_0 X0) X2 X3) \in X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0)) \Rightarrow (k9\_subset\_1 X0 X1 X2 = k3\_xboole\_0 X1 X2) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0)) \Rightarrow (m1\_subset\_1 (k9\_subset\_1 X0 X1 X2) (k1\_zfmisc\_1 X0)) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 = k3\_xboole\_0 X0 X1) \Leftrightarrow (\forall X3. (X3 \in X2) \Leftrightarrow ((X3 \in X0) \wedge (X3 \in X1))) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0)) \Rightarrow (k9\_subset\_1 X0 X1 X2 = k9\_subset\_1 X0 X2 X1) \tag{5}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & ((v2\_waybel23 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0)))) \Rightarrow (\forall X2.((v2\_waybel23 X2 X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))) \Rightarrow (v2\_waybel23 (k9\_subset\_1 (u1\_struct\_0 \\ & X0) X1 X2) X0))) \end{aligned}$$