

## t20\_waybel\_3

(TMVXZw9VmbA9HUZFY11U9ptScQ79LpU1h1A)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v3\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v4\_orders\_2 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_waybel\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r3\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_yellow\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge (v3\_orders\_2 \\ & X0) \wedge (l1\_orders\_2 X0))) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge ( \\ & m1\_subset\_1 X2 (u1\_struct\_0 X0))) \Rightarrow ((r3\_orders\_2 X0 X1 X2) \Leftrightarrow (r1\_orders\_2 \\ & X0 X1 X2)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (v3\_orders\_2 X0) \wedge (l1\_orders\_2 \\ & X0)) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((r1\_waybel\_3 X0 X1 X2) \Leftrightarrow (\forall X3. \\ & ((\neg v1\_xboole\_0 X3) \wedge ((v1\_waybel\_0 X3 X0) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))))) \Rightarrow (\neg (r3\_orders\_2 X0 X2 (k1\_yellow\_0 X0 X3)) \wedge \\ & (\forall X4. (m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\neg (X4 \in X3) \wedge (r3\_orders\_2 \\ & X0 X1 X4)))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1\_orders\_2 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0))) \Rightarrow ((v12\_waybel\_0 X1 X0) \Leftrightarrow (\forall X2. (m1\_subset\_1 \\ & X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 \\ & X0)) \Rightarrow (((X2 \in X1) \wedge (r1\_orders\_2 X0 X3 X2)) \Rightarrow (X3 \in X1)))))) \end{aligned} \tag{3}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\ & X0) \wedge (l1\_orders\_2 X0))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((r1\_waybel\_3 \\ & X0 X1 X2) \Rightarrow (\forall X3.((\neg v1\_xboole\_0 X3) \wedge (v1\_waybel\_0 X3 X0) \wedge \\ & ((v12\_waybel\_0 X3 X0) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0)))))) \Rightarrow ((r3\_orders\_2 X0 X2 (k1\_yellow\_0 X0 X3)) \Rightarrow (X1 \in X3)))))) \end{aligned}$$