

# t22\_waybel33 (TMGNdrjrAHMkUhdjbAKQp- WEwuufJgqEdpyr)

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Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $m2\_yellow\_9 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m3\_yellow\_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_cantor\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_pre\_topc : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_cantor\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_tops\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_cantor\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_cantor\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & X0))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & X0))) \Rightarrow ((r1\_tarski X1 X2) \Rightarrow (r1\_tarski (k1\_cantor\_1 X0 X1) (k1\_cantor\_1 \\ & X0 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X2 X1)) \Rightarrow (r1\_tarski (k2\_xboole\_0 X0 X2) X1) \tag{2}$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0))) \Rightarrow (u1\_pre\_topc X0 = k1\_cantor\_1 (u1\_struct\_0 X0) (k2\_cantor\_1 (u1\_struct\_0 X0) (u1\_pre\_topc X0))) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow \\ & (((v1\_tops\_2 X1 X0) \wedge ((v2\_cantor\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \Leftrightarrow ((v1\_tops\_2 (k2\_cantor\_1 \\ & (u1\_struct\_0 X0) X1) X0) \wedge ((v1\_cantor\_1 (k2\_cantor\_1 (u1\_struct\_0 \\ & X0) X1) X0) \wedge (m1\_subset\_1 (k2\_cantor\_1 (u1\_struct\_0 X0) X1) (k1\_zfmisc\_1 \\ & (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow \\ & ((u1\_pre\_topc\ X0 = k1\_cantor\_1\ (u1\_struct\_0\ X0)\ X1) \Leftrightarrow ((v1\_tops\_2 \\ & X1\ X0) \wedge ((v1\_cantor\_1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1 \\ & (u1\_struct\_0\ X0)))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1 \\ & X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1 \\ & X0))) \Rightarrow ((r1\_tarski\ X1\ X2) \Rightarrow (r1\_tarski\ (k2\_cantor\_1\ X0\ X1)\ (k2\_cantor\_1 \\ & X0\ X2)))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0\ X0\ X0 = X0 \quad (7)$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0) \Rightarrow (m1\_subset\_1\ (u1\_pre\_topc\ X0)\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X1)) \Rightarrow ( \\ & \forall X2.(m3\_yellow\_9\ X2\ X0\ X1) \Rightarrow ((v2\_pre\_topc\ X2) \wedge (l1\_pre\_topc \\ & X2))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0.(l1\_pre\_topc\ X0) \Rightarrow (\forall X1.(m2\_yellow\_9\ X1\ X0) \Rightarrow ((v2\_pre\_topc\ X1) \wedge (l1\_pre\_topc\ X1))) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1 \\ & X0))) \Rightarrow (m1\_subset\_1\ (k2\_cantor\_1\ X0\ X1)\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1 \\ & X0))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_pre\_topc\ X0) \Rightarrow (\forall X1.(l1\_pre\_topc\ X1) \Rightarrow (\forall X2. \\ & ((v2\_pre\_topc\ X2) \wedge (l1\_pre\_topc\ X2)) \Rightarrow ((m3\_yellow\_9\ X2\ X0\ X1) \Leftrightarrow \\ & ((u1\_struct\_0\ X2 = k2\_xboole\_0\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)) \wedge \\ & ((v1\_tops\_2\ (k2\_xboole\_0\ (u1\_pre\_topc\ X0)\ (u1\_pre\_topc\ X1))\ X2) \wedge \\ & ((v2\_cantor\_1\ (k2\_xboole\_0\ (u1\_pre\_topc\ X0)\ (u1\_pre\_topc\ X1)) \\ & X2) \wedge (m1\_subset\_1\ (k2\_xboole\_0\ (u1\_pre\_topc\ X0)\ (u1\_pre\_topc \\ & X1))\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X2)))))))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_pre\_topc\ X0) \Rightarrow (\forall X1.((v2\_pre\_topc\ X1) \wedge ( \\ & l1\_pre\_topc\ X1)) \Rightarrow ((m2\_yellow\_9\ X1\ X0) \Leftrightarrow ((u1\_struct\_0\ X0 = u1\_struct\_0 \\ & X1) \wedge (r1\_tarSKI\ (u1\_pre\_topc\ X0)\ (u1\_pre\_topc\ X1)))))) \end{aligned} \quad (13)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v2\_pre\_topc\ X0) \wedge (l1\_pre\_topc\ X0)) \Rightarrow (\forall X1. \\ & ((v2\_pre\_topc\ X1) \wedge (l1\_pre\_topc\ X1)) \Rightarrow (\forall X2.((\neg v2\_struct\_0 \\ & X2) \wedge ((v2\_pre\_topc\ X2) \wedge (l1\_pre\_topc\ X2))) \Rightarrow (((m2\_yellow\_9\ X2 \\ & X0) \wedge (m2\_yellow\_9\ X2\ X1)) \Rightarrow (\forall X3.(m3\_yellow\_9\ X3\ X0\ X1) \Rightarrow ( \\ & m2\_yellow\_9\ X2\ X3)))))) \end{aligned}$$