

t23\_waybel\_9  
(TMbR9mG6oFBqbhMCZsrCvxJSzxZMzkgo)beo)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k9\_yellow\_6 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 (k2\_xboole\_0 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((X2 \in u1\_struct\_0 \\ & (k9\_yellow\_6 X0 X1)) \Leftrightarrow ((X1 \in X2) \wedge (v3\_pre\_topc X2 X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 (k9\_yellow\_6 X0 X1))) \Rightarrow (\exists X3. \\ & (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \wedge ((X3 = X2) \wedge (( \\ & X1 \in X3) \wedge (v3\_pre\_topc X3 X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((r1\_tarski\ X0\ X1)\wedge (r1\_tarski\ X2\ X3))\Rightarrow(r1\_tarski\ (k2\_xboole\_0\ X0\ X2)\ (k2\_xboole\_0\ X1\ X3)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k2\_xboole\_0\ X0\ X0 = X0 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc\ X0))\wedge(((v3\_pre\_topc\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))\wedge((v3\_pre\_topc\ X2\ X0)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))))))\Rightarrow(v3\_pre\_topc\ (k2\_xboole\_0\ X1\ X2)\ X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (10)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge((v2\_pre\_topc\ X0)\wedge(l1\_pre\_topc\ X0)))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k9\_yellow\_6\ X0\ X1)))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k9\_yellow\_6\ X0\ X1)))\Rightarrow(m1\_subset\_1\ (k2\_xboole\_0\ X2\ X3)\ (u1\_struct\_0\ (k9\_yellow\_6\ X0\ X1))))))$$