

t16\_yellow\_6  
(TMGtPQ4SUdRGCVmxfAYefxa4nir5M65WGkZ)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v4\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v7\_waybel\_0 : \iota \Rightarrow o$  be given. Let  $v1\_yellow\_6 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_yellow\_6 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $u1\_waybel\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k3\_funct\_1 : \iota \Rightarrow \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1\_xboole\_0 X0) \wedge \\ & (((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))))) \wedge (m1\_subset\_1 X3 X0))) \Rightarrow (k3\_funct\_2 X0 \\ & X1 X2 X3 = k1\_funct\_1 X2 X3) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \quad (3)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (4)$$

Assume the following.

$$v1\_xboole\_0 k1\_xboole\_0 \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2\_struct\_0 X0)\wedge(l1\_struct\_0 X0))\wedge \\ & ((v1\_yellow\_6 X1 X0)\wedge(l1\_waybel\_0 X1 X0)))\Rightarrow((v1\_funct\_1 (u1\_waybel\_0 \\ & X0 X1))\wedge((v3\_funct\_1 (u1\_waybel\_0 X0 X1))\wedge(v1\_funct\_2 (u1\_waybel\_0 \\ & X0 X1) (u1\_struct\_0 X1) (u1\_struct\_0 X0)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2\_struct\_0 X0)\wedge(l1\_struct\_0 X0))\wedge \\ & ((\neg v2\_struct\_0 X1)\wedge(l1\_waybel\_0 X1 X0)))\Rightarrow((v1\_funct\_1 (u1\_waybel\_0 \\ & X0 X1))\wedge((\neg v1\_xboole\_0 (u1\_waybel\_0 X0 X1))\wedge(v1\_funct\_2 (u1\_waybel\_0 \\ & X0 X1) (u1\_struct\_0 X1) (u1\_struct\_0 X0)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1\_struct\_0 X0)\wedge(l1\_waybel\_0 X1 X0))\Rightarrow \\ & ((v1\_funct\_1 (u1\_waybel\_0 X0 X1))\wedge((v1\_funct\_2 (u1\_waybel\_0 \\ & X0 X1) (u1\_struct\_0 X1) (u1\_struct\_0 X0))\wedge(m1\_subset\_1 (u1\_waybel\_0 \\ & X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X1) (u1\_struct\_0 \\ & X0)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0)\wedge(l1\_struct\_0 X0))\Rightarrow(\forall X1. \\ & (l1\_waybel\_0 X1 X0)\Rightarrow((v1\_yellow\_6 X1 X0)\Rightarrow((v2\_struct\_0 X1)\vee( \\ & k4\_yellow\_6 X0 X1 = k3\_funct\_1 (u1\_waybel\_0 X0 X1)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0)\wedge(l1\_struct\_0 X0))\Rightarrow(\forall X1. \\ & ((\neg v2\_struct\_0 X1)\wedge(l1\_waybel\_0 X1 X0))\Rightarrow(\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 X1))\Rightarrow(k2\_waybel\_0 X0 X1 X2 = k3\_funct\_2 (u1\_struct\_0 \\ & X1) (u1\_struct\_0 X0) (u1\_waybel\_0 X0 X1) X2))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))\Rightarrow(((X1\neq k1\_xboole\_0)\Rightarrow((v1\_funct\_2 X2 X0 \\ & X1)\Leftrightarrow(X0 = k1\_relset\_1 X0 X2)))\wedge((X1 = k1\_xboole\_0)\Rightarrow((v1\_funct\_2 \\ & X2 X0 X1)\Leftrightarrow(X2 = k1\_xboole\_0)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0)\wedge(v1\_funct\_1 X0))\Rightarrow((v3\_funct\_1 X0)\Rightarrow \\ & ((v1\_xboole\_0 X0)\vee(\forall X1.(X1 = k3\_funct\_1 X0)\Leftrightarrow(\exists X2. \\ & (X2 \in k9\_xtuple\_0 X0)\wedge(X1 = k1\_funct\_1 X0 X2)))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_xboole\_0 X0)\Rightarrow(\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_xboole\_0 X2)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (15)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0)\wedge(l1\_struct\_0 X0))\Rightarrow(\forall X1.((\neg v2\_struct\_0 X1)\wedge((v4\_orders\_2 X1)\wedge((v7\_waybel\_0 X1)\wedge((v1\_yellow\_6 X1 X0)\wedge(l1\_waybel\_0 X1 X0))))))\Rightarrow(\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X1))\Rightarrow(k2\_waybel\_0 X0 X1 X2 = k4\_yellow\_6 X0 X1))$$